Does empathy and adult attachment affect the stigma placed on individuals with mental health conditions?

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Declaration

This work is original and has not been submitted in relation to any other degree or qualification

Sign Date

Acknowledgements

Many thanks to my supervisor Professor Ros Bramwell for all of her help and guidance on this project. I would also like to thank the Psychology technicians for their help and guidance on using Bristol Online Survey.

Supervision log

University of Chester

Department of Psychology

Research Module Meeting Log 2016/2017

NAME: Tracey-Anne Rattu

SUPERVISOR: Professor Ros Bramwell

Date	**Discussion topics**
01/02/2017	Initial meeting to discuss the allocated topic.
15/02/2015	Discussion of different studies available in current research, what approach to take and number of participants required.
01/03/2017	Confirmed topic approach towards the stigma of mental health.
03/03/2017	Emailed different research studies to the supervisor to talk about current research findings. Had a telephone call to confirm that Webb et al (2016) was an interesting study and could be replicated.

06/03/2017 Emailed supervisor Ros Bramwell the participant information sheet and gained feedback for the ethics form in order to submit

08/03/2017 Had a meeting at 9.15 am in Ros Bramwell's office to discuss ethics form in greater detail.

09/03/2017 Confirmed with Ros that ethics form documents were okay and submitted the ethics amendment form.

09/03/2017 Gained ethical approval subject to amendments. Telephoned Ros to confirm what amendments needed to be made and why.

24/03/2017 Emailed Ros to discuss amendment's further. Then telephoned her and she advised me to talk to Bryan Hiller the I.T. technician to confirm how the randomisation of vignette would occur in order to update my ethics amendment form regarding this.

29/03/2017 9.15 am meeting with Ros, ethics amendment form signed and sent off.

30/03/2017 Ethics approval gained. Discussed over the telephone with Ros how to gain participant.

03/04/2017 Met Bryan Hiller the I.C.T technician in order to gain information on how to randomise the vignettes on the Bristol online system and RPS. Telephoned Ros to update her on this.

24/05/2017 Went into Ros office around 12.30 in order to discuss making an amendment to my recruitment of participants. Confirmed with Ros that this is a beneficial idea as recruitment is not going as well as predicted.

25/05/2017 Telephoned Ros three times throughout the day in order to discuss recruitment of participants.

31/05/2017 9.15 am meeting with Ros to discuss ethics amendment form to make changes on participants recruitment in order to include non-student participants also. Signed and sent off the form.

8/06/2017 Telephoned Ros to discuss how recruitment is now going.

13/06/2017 Telephoned Ros to discuss progress overall.

06/07/2017 9.15 am telephoned Ros Bramwell to discuss making an overall plan for the complete dissertation.

26/07/2017 3pm meeting to discuss the plan and talk more in depth about the introduction section.

02/08/2017 9.15 am meeting to discuss analysis. Stayed in University all day and worked on analysis. Met with Ros a number of times throughout the day regarding issues and progress.

03/08/2017 9.15 am meeting to discuss analysis further. Stayed at University all day working on analysis again. Had many mini meeting with Ros regarding this.

09/08/2017 3pm telephone call with Ros to discuss regression section of the analysis and to gain further advice.

14/08/2017 9.15 am meeting with Ros to discuss the discussion section of the dissertation. Stayed at university all day and met with Ros numerous times for help and advice.

22/08/2017 9.30 am meeting with Ros to discuss the discussion in further detail. Stayed at University all day to work on it. Met with Ros at 4.30 pm to discuss queries.

06/09/2017 Gained feedback on draft and any changes that would be worthwhile to make. Stayed at University from 9-3 to make final changes.

13/09/2017 Telephone call with Ros at 15.30 pm to confirm the changes that have been made to the dissertation and if any other changes need to be made before it is submitted.

18/09/2017 Telephone call with Ros and 16.30 pm for final queries regarding appendices and hand in date.

SIGNED

STUDENT _____ DATE: _____

SUPERVISOR _____ DATE: _____

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Abstract

Current research suggests that mental health stigma can lead to discrimination, social disadvantages, self-stigma, and a lack of help seeking. Adult attachment styles are proposed to influence an individual's empathy levels, which can decrease mental health stigma.

This study is a replication study of Webb et al, (2016) with slight differences in methodology. It investigated if adult attachment and empathy levels affected the stigma placed on individuals with mental health disorders. The hypotheses were as follows; (1) a schizophrenia vignette would produce more stigma than homelessness, (2) participants with greater empathy levels would have lower levels of stigma, regardless of vignette type, (3), adult attachment would moderate the relationship between empathy and stigma, and the secure adult attachment style would produce decreased levels of stigma and greater empathy.

Participants (N=80) empathy was measured via an Empathy quotient-short Form (Wakabayashi et al, 2006) and adult attachment styles via a Relationship Questionnaire (Bartholomew & Horowitz, 1991). Participants read a vignette describing and agitated man in a library, described as either homeless or schizophrenic. They then rated 11 stigma statements.

2x2 ANOVA results found partial support for hypothesis 1,as the main effect of status on stigma was significant, $F (1, 75) = 6.11$, $p < .02$, and the interaction between vignette and status on stigma levels was also significant, $F (1, 75) = 4.10$, $p < .05$. Students stigmatised schizophrenia less than the general

population.

Correlation analysis concluded that empathy was significantly related to stigma (.43** (77)) supporting hypothesis 2, and regression analysis showed a significant main effect for empathy on stigma at step 1 (β= -.43, *t*=3.77, *p*< .001) and step 2 (β=-1.00, *t*= -1.87, *p*< .07).

Regression results lack support hypothesis 3 as the total amount of variance for stigma did not increase significantly when interactive terms for empathy and adult attachment style were added (R^2=.24, ΔR^2= .04, ΔF (5.34) = .52, *p* = .03. Suggesting the interaction between empathy and adult attachment style does not predict stigma.

Overall empathy related to stigma within this study. Future research should determine if empathy training techniques can reduce mental health stigma.

A larger sample size is needed to gain more individuals from the four attachment styles to determine their effects on stigma more effectively.

Another key finding was that stigma tendencies differed between student and non-student (general population) participants. Future research should investigate if training interventions and prior knowledge are beneficial for the reduction of stigma.

Introduction

This study will combine three key themes in Psychology, the stigma of mental health, adult attachment styles and empathy. Initially each of the themes will be defined and then critically evaluated in terms of the relationships between them.

Stigma

Stigma is a form of discredit or disgrace which leads to a person being excluded or disconnected from others (Byrne, 2000). Goffman (1963) suggested that the ancient Greeks devised the term stigma to define signs that were engraved or burnt into the bodies of individuals who were to be avoided because of their status as a slave, traitor, or criminal. He highlights that the term is used today, but applied to feelings of disgrace towards others, dependant on their status in society (Goffman, 1963).

In recent years, a great amount of research has been conducted on stigma and social exclusion in regards to mental health disorders, in a wide range of countries, especially America (Corrigan, Edwards, Green, Diwan & Penn, 2001; Rüsch, Angermeyer, & Corrigan, 2005; Link & Phelan, 2006; Rose, Thornicroft, Pinfold, & Kassam, 2007; Kroska & Harkness, 2008; Schomerus, Angermeyer, 2008). This may be due to American Social Scientists focusing more specifically on mental health research from the 1950's onwards. With their main concern being the lack of understanding from the general public, alongside fear, judgements and general manner towards those who are mentally ill (Phelan, Link, Stueve & Pescoslido, 2000).

Research does suggest that due to society not having good understanding of mental disorders, stigma ascends. As a result, discrimination within the workforce and other great social difficulties within healthcare, housing and social life arise (Rüsch, Angermeyer, & Corrigan, 2005). Eventually causing a

loss of confidence and 'self-stigma' (Rüsch, Angermeyer, & Corrigan, 2005). Prior understanding and contact with others with mental health disorders via friends, family or education has been found to beneficial in the reduction of stigma. It is linked with a lack of prejudice against mental health disorders (Corrigan, Edwards, Green, Diwan & Penn, 2001). Furthermore, a review of previous literature found that both prospective and retrospective contact with an individual with a mental health disorder does results in an overall decrease in stigma (Couture & Penn, 2003).

The stigma of mental health also involves the labelling of those individuals diagnosed with a mental health disorder and a parting between 'us and 'them' based on differences (Link & Phelan, 2006) alongside a desire for social distance. Social distance is proposed to be influenced by benevolence, as some individuals eliciting the stigma consider the person with mental illness as similar to a child. Social distance is also said to be influenced by authoritarianism, as some individuals believe that those with mental health disorders are inferior and not able to look after themselves (Corrigan, Edwards, Green, Diwan & Penn, 2001).

Diagnostic labels associated with mental health disorders are also suggested to lead to greater stigma (Kroska & Harkness, 2008).The labelling theory of mental health, suggests that labelling mental illness causes those with mental disorders to accept cultural conceptions. This then creates undesirable self-feelings and expectations of rejection (Link 1987; Link et al. 1989, as cited in Kroska & Harkness, 2008).

The stigma arising from the labels associated with mental illness has stemmed alterations to be made to existing labels. For example, the label ‘chronic’ has been transformed to ‘severe and persistent (Parabiaghi, Bonetto, Ruggeri, Lasalvia, & Leese, 2006). Other concerns have also been raised about the label ‘schizophrenia. It is considered the utmost stigmatised disorder, and a need for the label to be altered is deemed essential (Kim & Berrios, 200; Shulze & Angermeyer, 2003 Levin, 2006).

The stigma suffered by individuals with mental health disorders can also create barriers in them pursuing support and help for their condition (Schomerus, Angermeyer, 2008; Rose, Thornicroft, Pinfold, & Kassam, 2007). It is suggested that the labelling of mental health disorders, and stigma combined, are accountable for this. Patients have been found to become guarded and protective about their condition, due to worry and fear of rejection. Resulting in a lack of access to health care (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989).

A wealth of researchers have used vignettes in previous studies to investigate the stigma of mental health (Jorm & Wright, 2008; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005; Rose, Thornicroft, Pinfold, & Kassam, 2007; Reavley & Jorm, 2011). In Australia, researchers conducted 6019 telephone interviews with participants using vignette methodology. Participants read a vignette defining depression, suicide, chronic schizophrenia, stress and other

mental health conditions. They then answered questions regarding discrimination and social distance. Results found that chronic schizophrenia was very highly stigmatised. Suggesting that a focus on specific mental health disorders may be required to combat stigma (Reavley & Jorm, 2011).

Other researchers have used vignettes to investigate mental illness, providing explanations for the mental illness as; leukaemia, brain-tumour, alcohol consumption and more. They asked 303 adolescent participants to rate statements for danger from responsibility, social distance and more. Results found that alcohol elicited the most stigma however mental illness was next. Furthermore, blame positively correlated to the discrimination elicited towards those who are mentally ill (Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005). Suggesting that some people feel that individuals with mental health disorders are to blame for their condition just as much as those who are alcohol dependant.

Overall, a lot of research has been conducted on the stigma of mental illness investigating both public members, students and health professional perceptions of the mentally ill (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005; Lauber, Nordt, Braunschweig & Rossler 2006; Rose, Thornicroft, Pinfold, & Kassam, 2007; Jorm & Wright, 2008; Rao, Mahadevappa, Pillay, Sessay, Abraham, Luty, 2009; Conner, Copeland, Koeske, & Reynolds, 2010) and how stigma interferes with help seeking tendencies of those diagnosed (Corrigan, 2004; Chandra,& Minkovitz, 2006; Golberstein, Eisenberg, & Gollust, 2008; Eisenberg, Downs,

Golberstein, & Zivin, 2009). A wealth of research has been conducted in America (Phelan, Link, Stueve, & Pescoslido, 2000; Corrigan, 2004; Chandra,& Minkovitz, 2006; Golberstein, Eisenberg, & Gollust, 2008; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005), and a lot of research has also been conducted within the United Kingdom (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Rose, Thornicroft, Pinfold, & Kassam, 2007; Rao, Mahadevappa, Pillay, Sessay, Abraham, Luty, 2009). Research has also been conducted in other countries like Australia (Jorm & Wright, 2008), Switzerland (Lauber, Nordt, Braunschweig & Rossler 2006), and a review of population-based attitude studies of psychiatry discovered that a lot of research has been conducted in Europe between 1990 and 2004 (Angermeyer & Dietrich, 2006).

A wealth of research use student participants (Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005;Chandra & Minkovitz, 2006; Rose, Thornicroft, Pinfold, & Kassam, 2007; Golberstein, Eisenberg, & Gollust, 2008), members of the public (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Conner, Copeland, Koeske, & Reynolds, 2010), and medical professionals (Lauber, Nordt, Braunschweig & Rossler 2006; Rao, Mahadevappa, Pillay, Sessay, Abraham, Luty, 2009). Therefore it may suggest that as a wide range of participants have been involved within previous research, findings are generalizable to the wider population.

Methods range from a large amount of vignette studies (Jorm & Wright, 2008; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005; Rose, Thornicroft, Pinfold, & Kassam, 2007), surveys (Lauber, Nordt, Braunschweig &

Rossler 2006; Golberstein, Eisenberg, & Gollust, 2008; Conner, Copeland, Koeske, & Reynolds, 2010; Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000), questionnaire studies (Rose, Thornicroft, Pinfold, & Kassam, 2007; Rao, Mahadevappa, Pillay, Sessay, Abraham, Luty, 2009) and interviews (Chandra & Minkovitz, 2006).

Previous research has produced similar findings regardless of the methods used, with regards to public members and health professionals stigmatising those with mental health disorders. As well as stigma leading to less access of health care from those diagnosed (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Angermeyer & Dietrich, 2006; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005; Rose, Thornicroft, Pinfold, & Kassam, 2007; Jorm & Wright, 2008; Rao, Mahadevappa, Pillay, Sessay, Abraham, Luty, 2009; Conner, Copeland, Koeske, & Reynolds, 2010).

Overall, current research informs us that a lack of understanding regarding mental health disorders leads to stigmatisation (Rüsch, Angermeyer, & Corrigan, 2005), and that this can eventually lead to self-stigmatisation (Rüsch, Angermeyer, & Corrigan, 2005). However, prior contact with an individual with mental health disorders can stem reduced stigma levels (Corrigan, Edwards, Green, Diwan & Penn, 2001). Further research is deemed essential to comprehend why there is an association between stigma and lack of healthcare seeking (Corrigan, 2004).

The stigma of mental health disorders is still a very prevalent issue. More research is required to understand what factors may contribute to the stigma.

Within this study adult attachment and empathy will be explored in further detail in order to investigate their contribution to mental health stigma.

Adult attachment and empathy

Empathy is a person's reaction to an observed experience of another person and the manner in which they respond (Davis, 1983). Davis (1983; as cited in Britton & Fuendeling 2005) suggested that empathy is a steady trait that comprises of cognitive and emotional parts.

Bowlby's (1982; as cited in Britton & Fuendeling, 2005) theory of attachment proposed that individuals biologically need to progress attachments and relationships with others. With the aim of attaining protection and safety. Attachments are shaped with others that comprise of "proximity-seeking behaviour" and establishment of a "secure base" in times of need and worry.

Hazan & Shaver (1987; as cited in Britton & Fuendeling, 2005) elaborated on attachment theory. They suggested that individuals within romantic adult relationships also provide a "secure base" to their partners when in need. This "proximity seeking-behaviour" then forms an attachment relationship. They further conclude that in attachment-related circumstances, adults access their internal working model of previous romantic experiences. This then influences future attachment behaviour (Hazan & Shaver, 1987; as cited in Britton & Fuendeling, 2005).

In terms of linking adult attachment styles to empathy, minor research has been conducted within this area (Webb et al, 2016). However, Britton & Fuendeling (2005) explored the connection among childhood attachments, parental bonds and romantic attachments to Davis (1983) emotional and cognitive components of empathy (Britton & Fuendeling (2005). Via self-report questionnaires, results showed that participant's attachment styles affected their empathy levels more undesirably than positively. Furthermore, they found a greater emotional relation between empathy and attachment and less of a cognitive relation. Suggesting that the relationship between empathy and attachment is not at the same level of cognition as empathy. Adult romantic attachments were also found to link to empathy more compared with parental bonds. A direct link between adult attachment and empathy was proposed. As Britton & Fuendeling, (2005) found it to be essential for an individual to comprehend the requirements and wants of others in order to provide a "secure base" for them. Hypothesising overall, that secure attachments should correlate with larger empathy levels than the insecure attachment style (Britton & Fuendeling, 2005). Although this direct link is highlighted, due to a lack of agreement concerning empathy being a construct, and its classification differing dependent upon the field in which it is being considered (Aragona, Kotzalidis & Puzella, 2013; Webb et al 2016), attachment theorists have not used the term 'empathy' within their research (Duan & Hill, 1996: as cited in Britton & Fuendeling, 2005). Since its entry into psychology and medicine in the late 19th-early 20th century, many differing definitions have been allocated to empathy by

researchers (Aragona, Kotzalidis & Puzella, 2013; Webb et al 2016) causing empirical complications and theoretical misperceptions (Duan & Hill, 1996).

Alternative research has used self-report measures to study if emotional competence was related to attachment security and social behaviour. Results found that secure attachment relationship styles stimulated increased empathy levels. Secure attachment styles were also suggested to involve suitable social behaviour leading to greater levels of empathy, positive expressiveness and reduced undesirable dominant expressiveness (Laible, 2007).

Other researchers have used self-report measures on counselling students in the form of Mehrabian and Epstein (1972; as cited in Trusty, Ng, Watts, 2005) measure of emotional empathy and an attachment style self-report measure (ASQ; Feeney, Noller, & Hanrahan, 1994; as cited in Trusty, Ng, Watts, 2005) to explore if emotional empathy is affected by adult attachment style. Results found higher levels of empathy were linked to higher levels of anxiety and lower levels of evasion. Suggesting that increased empathy enabled counsellors to emotionally connect patients, as they were avoiding them less. Concluding that empathy may create an ability to bond with others who are suffering difficult problems (Trusty, Ng, Watts, 2005).

Other researchers have investigated the link between ambivalent and avoidant attachment styles, helping behaviour and empathy after the 9/11 terror attacks in America. Results found that attachment style was connected to the participant's capability to empathise with, and support others. Lower avoidant attachment styles and securely attached individuals presented superior

empathy levels (Wayment, 2006).

Overall, current research available on adult attachment styles and empathy all had student participants, used self-report measures and questionnaires, and were conducted in America (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007). Similar results from current research has been produced in terms of secure attachment styles (less avoidant) being linked to greater empathy levels (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007). However the research findings may be questionable due to the self-report methodology used. Researchers highlight the human predisposition of individuals to represent themselves in the finest possible light, and unwillingness to answer honestly on topics deemed sensitive to them. This creates a misrepresentation in results gained (Fisher, 1993). Psychologists further suggest that the correlations between social desirability and self-report measures are confirmation of their invalidity (McCrae & Costa, 1983).

Adult attachment and stigma

Although limited in amount, current research has been conducted to examine a link between adult attachment styles and mental health stigma (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). Researchers in Canada used a student population to investigate a link between attachment styles and interpersonal relationships. They focused on students help-seeking and social distance behaviour towards individuals

diagnosed with mental health disorders. Self-report measures were used to measure; attachment style, social distance, self-esteem, and self-stigma. Relationship styles were measured via inventories also. Results found that securely attached students had reduced self-stigma of mental health, were more supportive and helping and required less social distance from those diagnosed. Dismissively attached students were found to have the complete opposite. Students who disclosed that they had overprotective parents also had an amplified desirability for social distance. Suggesting overall, that adult attachment styles can influence and even intensify the stigma around mental health and helping behaviours (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015).

Alternative quantitative research in Turkey inspected the link between attachment styles and stigma in adult participants, comparing 186 females with 175 males. Relationship and stigma questionnaire measures were used to determine attachment style and levels of stigma. Results found that individuals with secure attachment styles had decreased stigma tendencies for exclusion, discrimination and prejudgment. As well as psychological health dimensions. Alternatively, individuals who were fearfully attached scored greater for stigma and labelling, psychological health dimensions. (Gencoglu, Topkaya, Sahin, & Kaya, 2016).

All of the research within this area has used self-report measures to examine the link between attachment styles and mental health stigma. Similar findings have been produced suggesting that individuals who are securely attached,

stigmatise others less (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). The research has been conducted in Turkey (Gencoglu, Topkaya, Sahin, & Kaya, 2016) and Canada (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Research is not yet available within this area from other countries. Also, as previous research have used student populations (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015), and individuals with greater than average intelligence levels (Gencoglu, Topkaya, Sahin, & Kaya, 2016) results may not be generalizable to the general population. Suggesting a need for future research that includes participants with varying intelligence and education levels.

Furthermore as high school students were participants within one of the research studies (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015), results would not be generalizable to the adult population. Concluding a need for research from other countries using a wider range of participants.

Empathy and stigma

Research suggests that an individual's empathy levels may influence their level of stigma (Phelan & Basow, 2007; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014). Current research within this area is limited and it is suggested that difficulties in defining the term empathy is a reason for this (Aragona et al, 2013; Dziobek, 2012; Welker, 2005, as cited in: Webb et al 2016).

In current research simulation tools have been used to imitate the visual and auditory hallucinations that an individual with schizophrenia would experience. This is conducted to upsurge participants empathy for individuals with mental illness, with the aim of diminishing stigma (Ando, Clement, Barley & Thornicroft, 2011). The simulation technologies used to imitate the hallucinations are virtual reality technology or audiotaped recordings (Webb et al, 2016).

A review of 10 simulation studies across 14 European countries has been conducted. Overall, simulated hallucination techniques led to larger levels of empathy, but also greater desire for social distance from individuals with mental health disorders, in particular schizophrenia. Suggesting that findings of simulation effects on mental health stigma are not straightforward, but instead varied and conflicting. Concluding a need for further research within this area (Ando, Clement, Barley & Thornicroft, 2011). Furthermore, the results found may suggest that simulation techniques are unsuccessful in reducing mental health stigma. Researchers further suggest that the differences between the participants and those diagnosed were still apparent. A gap between us and them was still pursued by participants, despite augmented levels of empathy being found (Webb et al, 2016).

Alternatively, simulation tools are often used on nursing students. With the students often reporting that the techniques are well appreciated for improving their therapeutic and expert skills (Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014). Simulation techniques are also found to eliminate the stigmatization of mental illness predominantly found in psychiatric nurses

early on in their career, alongside any feelings of fear and anxiety (Brown, 2014).

Alternatively, researchers have used self-report methodologies to examine medical students in America, and their approaches towards treating psychiatric patients. Results found that stereotypes and stigma affected the student's capability to treat patients. Students were defining their work as unpleasant and found eventually incapable of accomplishing their job role. A lack of empathy was found to be the overall cause for this. Furthermore, stigmatizing opinions of the friends and family of the medical student were found to influence their lack of empathy, and increased stigma. With friends and family also being found to stigmatise the medical student's career choice. Concluding overall, that health departments must focus on the problematic issue of the stigma placed on mental health disorders within psychiatry. By incorporating methods that may upsurge empathy levels of their students (Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009).

Alternative research in America has used vignettes and questionnaires as their methodology to study student perceptions of mental illness. They measured; empathy, familiarity levels and social dominance orientation and attitudes. Three vignettes were provided to participants comprising of scenarios of individuals with alcohol dependence, stress and depression. Results showed that individuals with greater self-reported levels of empathy were more likely to label the individuals in the vignette narrative as 'mentally ill'. This linked with a

declined desirability for social distance (Phelan & Basow, 2007). With the labelling of mental illness being known as a cause of lack in seeking specialised help and support, and empathy being linked to greater acceptance, this study suggests increased empathy is vital for decreasing the stigma of mental health (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Phelan & Basow, 2007). Although findings do suggest that greater levels of empathy may positively relate to decreased levels of mental health stigma, there are limitations to this study. The results may not be generalizable to a wider population as the participants were all students. Furthermore, the results may have varied if less common psychological disorders were described within the vignettes rather than disorders that are deemed more known or common (Phelan & Basow, 2007).

Researchers in the United Kingdom have examined the effects of academic teaching of mental health disorders on adolescent student's levels of stigma. The quantitative methods used included one group of adolescents being taught six lessons. These were on differing conditions, proposed to be well known to young students such as; depression, suicide, eating disorders etc. The second group were given educational resources on the identical conditions, ranging from the lesson plans from the taught sessions, videos, and role play etc. Results found that adolescents who received classes had the highest growth in their empathy levels and understanding about mental health disorders (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). Suggesting firstly, that greater

levels of empathy are linked to lower levels of mental health stigma. Secondly, in terms of suggestions for upcoming research or intervention programmes, taught sessions regarding mental illness may be valuable in improving empathy levels of adolescents towards mental illness. Resulting in a decline of stigma (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009).

Overall, current research examining the link between empathy levels and mental health stigma is limited (Webb et al 2016). A wealth of simulation research has been conducted across 14 European countries (Ando, Clement, Barley & Thornicroft, 2011), other research has been conducted within America (Phelan & Basow, 2007; Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014), and few in the United Kingdom (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). Within all of the current research participants have been students (Phelan & Basow, 2007; Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014). Despite methods ranging from taught lessons and learning materials (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009), vignettes and questionnaires (Phelan & Basow, 2007) and self-report measures (Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009), simulation techniques appear to be the most frequently used methodology (Ando,

Clement, Barley & Thornicroft, 2011; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014).

Findings overall remain mixed, with simulation techniques being proven to increase empathy levels and effective therapeutic communication, and reduce stigma in some research (Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014) but also increase social distance desirability in others (Ando, Clement, Barley & Thornicroft, 2011). Vignettes and questionnaire methodology have led to increased empathy and decreased social distance desirability (Phelan & Basow, 2007), and taught lessons are proven to increase empathy levels towards individuals with mental health disorders greatly (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009).

Overall research within this area is limited and further research is required to establish the link between empathy levels and the stigma of mental health. Previous research has looked at mental health stigma in general (Corrigan, Edwards, Green, Diwan & Penn, 2001; Rüsch, Angermeyer, & Corrigan, 2005; Link & Phelan, 2006; Rose, Thornicroft, Pinfold, & Kassam, 2007; Kroska & Harkness, 2008; Schomerus, Angermeyer, 2008), how empathy is related to stigma (Phelan & Basow, 2007; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014), how empathy is related to adult attachment styles (Britton & Fuendeling, 2005; Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007) and how adult attachment styles relate to stigma (Zhao, Young, Breslow, Michel, Flett, &

Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). However, Webb et al (2016) has brought together all of these factors to conduct a new area of research. They investigated the stigma of severe and persistent mental health disorders and other psychosocial and health conditions. They researched the link between empathy and stigma, and how adult attachment styles contribute to the hypothesised relationship between stigma and empathy. Results found that homelessness was stigmatised the most and empathy did significantly predict to stigma. However, the relationship between adult attachment style and empathy was not found to predict stigma significantly. This new area of research has produced interesting findings which this study aims to replicate (Webb et al, 2016).

Study purpose

As mentioned previously, this study is a replication of the Webb et al (2016) study (Appendix P) which considered the involvement of adult attachment and empathy in predicting the stigma placed on individuals with health conditions, psychosocial conditions and severe persistent mental health disorders. As in the original study (Webb et al, 2016), this study aims to examine (a) levels of stigma towards individuals with severe persistent mental health disorders compared with psychosocial disorders, (b) the relationship between stigma and empathy and (c), the part played by adult attachment on the relationship between stigma and empathy. Hypothesising that individuals with secure adult attachment will demonstrate less stigma and higher levels of empathy.

In the original study participants were shown a vignette describing an agitated man in a library and then randomly allocated to one of five behaviour explanations ranging from (a) schizophrenia (b) bipolar disorder (c) Alzheimer's disease (d) a severe psychological disorder and (e) homelessness (Webb et al, 2016). However, within this study participants will be exposed to the identical vignette, but will be randomly allocated to one of two behaviour explanations (a) Schizophrenia or (b) homelessness.

As research on stigma has used student participants (Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005;Chandra & Minkovitz, 2006; Rose, Thornicroft, Pinfold, & Kassam, 2007; Golberstein, Eisenberg, & Gollust, 2008) as well as empathy and stigma (Phelan & Basow, 2007; Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014) adult attachment styles and empathy (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007) and adult attachment styles and stigma (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Unlike the original study (Webb et al, 2016) within this study recruitment will include both student and non-student participants, to compare their results.

The hypotheses for this study mirror the original study (Webb et al, 2016) minus the three vignette behaviour explanations. Firstly it was hypothesised that the vignette examining a severe and persistent mental health disorder (Schizophrenia) would produce more stigma than the vignette examining homelessness. Secondly it was hypothesised that irrespective of the vignette

that participants were allocated to, those who self-reported greater levels of empathy would have lower levels of stigma. Finally, it was hypothesised that adult attachment style would moderate the connection between stigma and empathy. With the secure adult attachment style representing a “multiplicative effect” on the hypothesised association between stigma and empathy. Via displaying greater levels of empathy and lower levels of stigma, than any of the other attachment styles.

Method

Participants

80 participants took part within this study. The recruitment method consisted of recruiting both Psychology students and non-student (general population) participants. 37 participants were non-students, 42 were psychology undergraduate and postgraduate students from Chester University and 1 participant was a student from an unknown University. The research complied with the code of conduct of the British Psychological Society as ethical approval was gained from the ethics committee of the Department of Psychology at the University of Chester prior to the study (Appendix Q).

Materials

An information sheet was given to all participants containing details of the study, information regarding participation being voluntary, and that participants could leave at any point. Information sheets were slightly different for student

and non-student (general population) participants (Appendix A & B). A debrief was also provided to both student and non-student participants (general population) (Appendix C & D).

Empathy

The measure used within this study for empathy was the Empathy quotient-short Form (Wakabayashi et al, 2006) (Appendix E). This measure is a questionnaire that measures empathy via assessing affective and cognitive elements that may affect a person's level of empathy. The questionnaire contains 22 statements for participants to rate via a 4-point Likert scale ranging from 1: Strongly disagree to 4: Strongly agree. Six items statements reversed scored and a total empathy score for participants was generated for further analysis (Wakabayashi et al, 2006).

When created the empathy measure was tested for its reliability in measuring important cognitive styles and was proven useful to do so. A Cronbach's alpha test result showed 0.88, suggesting great internal reliability (Wakabayashi et al (2006).

The Empathy-Quotient short form (Wakabayashi et al, 2006) has also been validated by researchers studying the empathy levels of Chinese nursing students. The factorial structure of the form was tested initially. Researchers then translated the form into the Chinese language and results suggested that the internal reliability ranged from .82-.83 (Guan, Jin & Qian, 2012). These results were similar to the original study's results (Wakabayashi et al (2006).

Furthermore, the results also concluded that the form has acceptable test-retest reliability, leading to overall validation of the measure (Guan, Jin & Qian, 2012).

Adult attachment style

The attachment measure used within this study was the Bartholomew & Horowitz (1991) Relationship Questionnaire (Appendix F). The self-report questionnaire is a two dimensional model with four classes that are used to calculate the adult attachment styles of the participants. Participants were asked to rate four adult attachment styles, secure (A), fearful (B), preoccupied (C) and dismissive (D), via a 7-point Likert scale ranging from 1:Not at all like me, to 7: Very much like me. The attachment styles are written in paragraph form with a description of each style. For example the dismissive attachment style (D) description is as follows “I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me” (Bartholomew & Horowitz, 1991, p.244). Participants were also asked to confirm which of the styles best suited them.

This measure is strengthened via the wide range of attachment research it has been used in (Dotton, Saunders, Starzomski & Bartholomew, 1994; Kafetsios, 2004; Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010). Furthermore, the test-retest reliability of the measure has been examined by Scharfe & Bartholomew (1994). Results showed that over time, consistent attachment styles remained stable for 56% of male participants and 63% of female participants. Concluding overall that self-report measures, alongside interview

and partner-report measures of attachment of which they also tested, are moderately stable over time. However the results can only be generalizable for the period of time taken to conduct the study, thus being 8 months (Scharfe & Bartholomew, 1994).

Other researchers have tested the reliability and validity of The Relationship Questionnaire (Bartholomew & Horowitz, 1991) and Relationship Scales Questionnaire (Griffin & Bartholomew, 1994; as cited in Sumer & Gungor, 1999) on a Turkish sample. They then conducted a cross-cultural comparison with an American sample. Results suggested that both measures had acceptable levels of convergent validity, stability and reliability. However, respondents were not categorized into the four relationship styles in an adequate degree. Construct validity of the attachment styles was confirmed as the Turkish students identified with the attachment styles with ease, supporting the theory it is based on. The cross-cultural comparison found that the psychometric value of attachment styles were well-matched for both cultures (Sumer & Gungor, 1999). However, The Relationship Questionnaire (Bartholomew & Horowitz, 1991) was the least consistent out of the two measures across the two cultures. Clear cultural differences were identified between the insecure attachment styles and dismissive. Fearful styles of the American sample, and preoccupied styles in the Turkish sample appeared to be overrepresented. Concluding overall satisfactory validity and reliability but also clear cultural differences in attachment styles (Sumer & Gungor, 1999).

Stigma

Materials to measure stigma were created by Webb et al (2016). A vignette describing an anxious man in a library was provided to participants alongside explanations for his behaviour as either “schizophrenia “or “lost his home and is living in his car” then followed (Appendix G). Eleven statements regarding loss of control, fear, hazardous behaviours, absence of religious faith and avoiding those with mental health disorders were provided to participants. They rated them using a 5 point Likert scale ranging from 1: Strongly disagree to 5: strongly agree. (See Appendix H). Three items were reverse scored and a total stigma score was devised for further analysis (Webb et al, 2016).

Initially the study was put live on to Chester University’s Research Participation System (RPS) with the ‘Schizophrenia’ behaviour explanation for four weeks until 23 student participant responses were gained. The study was edited via the Bristol Online Survey System to change the behaviour explanation to ‘lost his home and is living in his car’. A new URL was created for it and reposted onto RPS. This gained a further 17 student participants.

Forty of the vignette descriptions were printed, 20 of each behaviour description, and randomly put into envelopes. The envelopes were shuffled prior to provision to ensure the researcher was unaware which vignettes the non-student (general population) participants were allocated to.

A debrief was provided that informed participants of the deception regarding stigma that took place within the study. Details of help organisations were

provided in case the participant felt any distress. Researcher details were provided also for further questions if required.

The stigma items were based on the original research team's literature review of stigma suggesting that the questions are reliable and valid as they are grounded in empirical research findings (Webb et al, 2016).

Procedure

Students completed the study online, via viewing all of the materials in their web browser. All documents were inputted into the Bristol Online Survey System and uploaded to The University of Chester's Research Participation system (RPS) for students to access.

An advertisement containing details of the study was posted on to RPS for all students to view (Appendix I) and on the University of Chester Facebook page (Appendix J). Deception took place as the advertisement informed students that they would be taking part in a study that is investigating how adult attachment and empathy levels may affect responses to other people in social situations with regard to religious, social and health concerns. They were not initially informed that the study was investigating the effect empathy levels and adult attachment have on mental health stigma.

The information section stated for participation of Psychology students only and participation would benefit the students via 2 RPS credits. Students signed up for the study willingly and were able to exit their browser to end participation at

any point.

The environment of which the participations completed the study cannot be confirmed it was their personal choice.

Participants completing the study would have opened it within their web browser and initially read the information sheet (Appendix A). Next they would have been asked to click next if they were happy to proceed with the study as a form of consent. Participants would then have been asked to complete 2 questionnaires. First the Wakabayashi et al (2006), Empathy quotient-short Form (Appendix E) to measure their empathy levels. Next The Relationship Questionnaire (Bartholomew & Horowitz, 1991) to measure their attachment styles (Appendix F).

Finally participants were then directed to read a vignette (Appendix G) which would have had either “lost his home and is living in his car’’ or “Schizophrenia” as the explanation of behaviour. They then would have rated 11 stigma items (Appendix H).

A debrief containing details of the deception, the real study purpose and details of support organisations would then have been displayed (Appendix C). Participants were awarded 2 RPS credits from the researcher upon completion. Completion would have been approximately 20 minutes.

Non-student (general population) participants were family and friends of the researcher, approached over the phone or in person. Details of the study were given provided, and participants were asked if they would like to take part. The

same deception took place as the student participants. Non-student participants were informed that the study was investigating how adult attachment and empathy levels may affect responses to other people in social situations with regard to religious, social and health concerns.

When participants answered yes to participation, it was taken as a form of consent. Most participants completed the study within the researcher's home, or their own home in a very quiet environment. Taking approximately 20 minutes. They were handed an anonymous envelope with printed versions of the study details, except the debrief. Participants initially read the information sheet (Appendix B) which was slightly different to that of the one provided to the student participants, as it did not state details of RPS credits. Participants then completed The Wakabayashi et al (2006), Empathy quotient-short Form (Appendix E) and The Relationship Questionnaire (Bartholomew & Horowitz, 1991) (Appendix F). Next they read the same vignette as the student participants, but dependent upon which randomised envelope they were provided with they were either given "lost his home and is living in his car'' or "Schizophrenia" as the behaviour explanation (Appendix G). Participants then rated the stigma items (Appendix H).

Upon completion, the researcher provided the participants with a debrief sheet (Appendix D). Details of the deception, actually study purpose and details of help organisations were provided. The debrief was slightly different to student participants as it did not contain details on how to access the student support team.

Participants were thanked for their participation, and informed that if they feel any distress, there is details of help organisations on the debrief sheet. All of the documents were then placed back into the envelopes and returned to the researcher. The envelopes were shuffled in a random order once all data was collected, to ensure anonymity of the participants was kept. Envelopes were stored in a locked cupboard within the researcher's home until the researcher required them for data analysis.

Analysis and Design

The dependant variable within this study was the level of stigma towards individuals with severe and persistent mental health disorders. The independent variables used to measure the stigma were empathy and adult attachment styles. A number of analysis techniques were used to analyse the data. A frequency listing for all variables was initially conducted to ensure all Likert scales matched to participants answers (Appendix K). A Cronbach's alpha analysis was conducted to assess the internal reliability of the empathy and stigma measures (see results section and Appendix L). Means and standard deviations for all variables are reported in tables 1-5 in the results section, alongside the results of a 2x2 between subjects ANOVA to measure the relationship between empathy and status and the psychosocial/health explanations, with the independent variable levels being homelessness vs schizophrenia and status (Appendix M).

Next a Pearson product moment correlation analysis assessed the relationship between four adult attachment styles, stigma and empathy variables (Table 6 in

results & Appendix N) they were also run for the individual vignette explanations too (Table 7 & 8 in results & Appendix N) Finally a hierarchical multiple regression analysis was conducted to investigate if stigma is predicted by empathy, and if the relationship between empathy and stigma can be moderated via participants adult attachment styles (Table 9 in results & Appendix O).

Results

Descriptives

In the study there were 80 participants, 42 students from the Psychology department of the University of Chester, 37 non-student members of the general public and 1 student from an unknown University. Of the two vignettes, 24 students were randomised to the schizophrenia explanation vignette and 18 to the homeless explanation vignette. For non-students, 19 were randomly allocated to the schizophrenia explanation vignette and 18 to the homeless explanation vignette.

Cronbach's Alpha

The Cronbach's alpha internal reliability score for the Wakabayashi et al (2006) Empathy quotient-short form was .84 and the Cronbach's alpha internal reliability score for the stigma measure was .73.

As research suggests that an alpha greater than .70 is adequate (Cortina, 1993), and a maximum value of .91 being recommended by researchers

(Streiner, 2003), the results from this test would suggest that the internal reliability of the measures were good and that overall the measures worked well (Wakabayashi et al, 2006).

Means with 2x2 ANOVAs and crosstabs

2x2 Anova's were conducted on adult attachment and empathy to check if the pseudo randomisation of vignette type worked accurately, and if similar scores were generated for students and non-students and overall for both vignettes.

Empathy

Table 1

The mean and standard deviation for the empathy variable

Variable	Mean	Standard Deviation
Empathy	1.50	.50

Table 2

Mean (SD) empathy score by group and vignette

Group	Student	Non-student	All
Vignette			
Homeless	68.59(6.09)	67.78(9.28)	68.17(7.80)
Schizophrenia	66.78(7.43)	65.30(6.76)	66.09(7.08)
All	67.55(6.87)	66.47(8.04)	67.03(7.44)

Note. SD= Standard deviation

Table 2 shows the mean empathy scores for student's vs non-students in response to both vignette types.

A two-way between subjects analysis of variance was conducted to assess the differences between empathy and status and the psychosocial/health explanations. The independent variable levels were homelessness vs schizophrenia and status.

The main effect of the vignette on empathy total was not significant, F (1, 74) = 1.58, p =.21.

The main effect of status on empathy was not significant, F (1, 74) = .45, p =.50.

The interaction between vignette and status on empathy levels was not significant, F (1, 74) = .04, p =.84.

Adult attachment

Table 3

Mean (SD) of adult attachment styles

Variable	Mean	Standard Deviation
Secure (A)	1.52	.51
Fearful (B)	1.50	.51
Preoccupied (C)	1.40	.55
Dismissive (D)	1.36	.51
Total	1.47	.50

Table 3 suggests that overall more participants identified themselves as securely attached and the dismissive adult attachment style was identified with the least by participants**.**

A two-way between subjects analysis of variance was conducted to assess the differences between adult attachment style and status and the psychosocial/health explanations. The independent variables levels were homelessness vs schizophrenia and status.

The main effect of the vignette on the secure adult attachment style was not significant, $F (1, 75) = .75$, $p = .39$.

The main effect of status on the secure adult attachment style was not significant, $F (1, 75) = .75$, $p = .39$.

The interaction between vignette and status on the secure adult attachment style was not significant, F (1, 75) =1.17, p =.28.

The main effect of the vignette on the fearful adult attachment style was not significant, F (1, 74) = .48, p =.83.

The main effect of status on the fearful adult attachment style was not significant, F (1, 74) = .00, p =.99.

The interaction between vignette and status on the fearful adult attachment style was not significant, F (1, 74) =.20, p =.65.

The main effect of the vignette on the preoccupied adult attachment style was not significant, F (1, 74) = .18, p =.67.

The main effect of status on the preoccupied adult attachment style was not significant, F (1, 74) = .70, p =.41.

The interaction between vignette and status on the preoccupied adult attachment style was not significant, F (1, 74) =3.08, p =.08.

The main effect of the vignette on the dismissive adult attachment style was not significant, F (1, 74) = .02, p =.90.

The main effect of status on the dismissive adult attachment style was not significant, F (1, 74) = .74, p =.39.

The interaction between vignette and status on the dismissive adult attachment style was not significant, F (1, 74) =.14, p =.71.

Stigma

A 2x2 ANOVA was conducted on stigma in order to test hypothesis 1, that more stigma would be produced for the schizophrenia vignette than homelessness. It was also to further investigate the differences between student and non-student (general population) participants on stigma in response to both vignettes.

Table 4

The total mean and standard deviation for the stigma variable

Variable	Mean	Standard Deviation
Stigma	1.47	.50

Table 5

Mean (SD) stigma score by group and vignette

Group	Student	Non-student	All
Vignette			
Homeless	22.11(5.41)	22.67(5.10)	22.39(5.19)
Schizophrenia	20.29(5.46)	25.90(5.97)	22.77(6.29)
All	21.07(5.45)	24.32(5.73)	22.59(5.78)

Note. SD= Standard deviation

Table 5 shows the mean stigma score for student's vs non-students in response to both vignette types.

A two-way between subjects analysis of variance was conducted to assess the differences between stigma and status and the psychosocial/health explanations. The independent variable levels were homelessness vs schizophrenia and status.

The main effect of the vignette on stigma total was not significant, $F(1, 75) = .32$, $p = .57$. As can be seen from table 5 there is little difference in the means for students for both vignettes, and little difference between means for non-students for both vignettes.

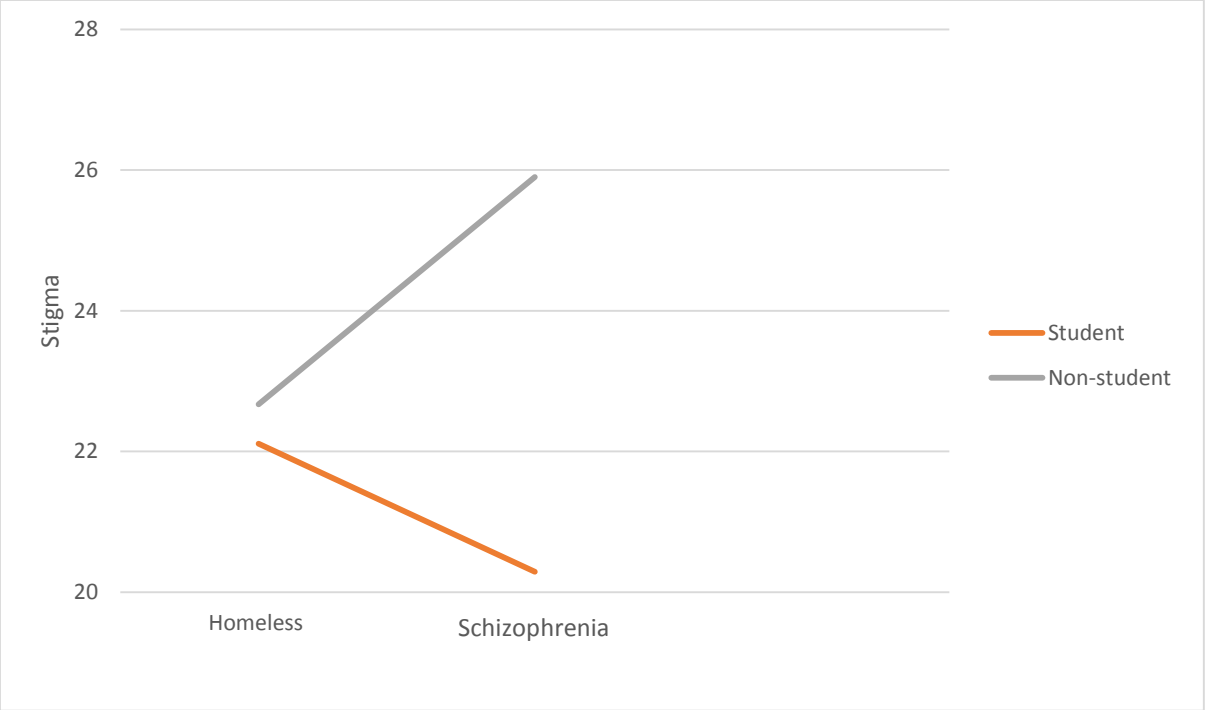
The main effect of status on stigma was significant, $F(1, 75) = 6.11$, $p < .02$, and the interaction between vignette and status on stigma levels was also significant, $F(1, 75) = 4.10$, $p < .05$ (See chart 1 below). Overall, the stigma means show little difference between both participant groups, however the general population were stigmatizing slightly more in general.

Students stigmatised less than the general population (non-students) on the schizophrenia vignette with their mean score being 20.29(5.46), compared with 25.90(5.97) for non-students (general population).

There was very little difference between stigma scores for the homeless vignette overall, with the mean score for students being 22.11(5.41), and for non-students being 22.67(5.10). Students stigma means were lower for schizophrenia 20.29(5.46), than homelessness 22.11(5.41). Whereas, non-

student (general population) means were lower for homelessness 22.67(5.10), than schizophrenia 25.90(5.97).

Chart 1



Mean stigma score by group and vignette

Chart 1 shows that the means for stigma in response to the homeless vignette were relatively similar for both student and non-student (general population) participants. However, the means were greater in difference for the schizophrenia vignette, with non-student (general population) participants stigmatising the schizophrenia vignette more than the student participants.

Correlations

Table 6

Correlations (N) between empathy, stigma and the four adult attachment styles

Measure	1	2	3	4	5	6
1. Empathy	--	--	--	--	--	--
2. Stigma	-.43**(77)	--	--	--	--	--
3. Secure attachment(A)	.28*(77)	-.02(78)	--	--	--	--
4. Fearful attachment(B)	-.05(76)	.02(78)	--	--	--	--
5. Preoccupied attachment(C)	-.15(76)	.20(78)	--	--	--	--
6. Dismissive attachment(D)	-.02(76)	-.13(78)	--	--	--	--

Note. N= Total number, *= *p*< .05, ** *p*< .01

Table 7

Correlations (N) between empathy, stigma and the four adult attachment styles for participants viewing the schizophrenia vignette only

Measure	1	2	3	4	5	6
1. Empathy	--	--	--	--	--	--
2. Stigma	-.39*(42)	--	--	--	--	--
3. Secure attachment(A)	.20(43)	-.18(43)	--	--	--	--
4. Fearful attachment(B)	.02(41)	-.02(42)	--	--	--	--
5. Preoccupied attachment(C)	-.15(41)	.13(42)	--	--	--	--
6. Dismissive attachment(D)	.01(41)	-.09(42)	--	--	--	--

Note. N= Total number, *= $p < .05$, ** $p < .01$

Table 8

Correlations (N) between empathy, stigma and the four adult attachment styles for participants viewing the homeless vignette only

Measure	1	2	3	4	5	6
1. Empathy	--	--	--	--	--	--
2. Stigma	-.49**(35)	--	--	--	--	--
3. Secure attachment(A)	.42*(34)	.17(35)	--	--	--	--
4. Fearful attachment(B)	-.13(35)	.08(36)	--	--	--	--
5. Preoccupied attachment(C)	-.13(35)	.30(36)	--	--	--	--
6. Dismissive attachment(D)	-.07(35)	-.20(36)	--	--	--	--

Note. N= Total number, *= $p < .05$, ** $p < .01$

A Pearson product moment correlation analysis was conducted to assess the relationship between the empathy, stigma and four adult attachment style variables. Results in the correlation table 6 above suggest that as hypothesised empathy is related to stigma and has produced significant correlations. Table 7 and 8 further suggest that significant correlations were produced between empathy and stigma when participants viewed the schizophrenia vignette or the homeless vignette, concluding that the overall correlations were in the expected direction that participants who were more empathic were less likely to

stigmatise the homeless of schizophrenic individual.

Furthermore, the secure adult attachment style (A) produced significant correlations with empathy.

As there are no significant correlations between the adult attachment styles and stigma, the hypothesis that adult attachment style is related to stigma is not supported.

Overall the N totals show that participants responded to most of the questions showing an underlying strength in the data as there were little missing cases.

Regression

A hierarchical regression analysis was conducted in order to investigate if empathy predicted stigma, and furthermore if adult attachment styles moderate the relationship between empathy and stigma. In step 1 stigma was regressed on empathy and adult attachment styles. In step 2 an interaction effect was examined within the data for the following interactions, empathy x secure adult attachment, empathy x fearful attachment, empathy x preoccupied adult attachment and finally empathy x dismissive adult attachment. .05 was the level at which all of the regression analysis were examined at. All main effects are shown in the table below.

Table 9

Hierarchical regression analysis predicting levels of stigma from adult attachment styles and empathy

Independent Variable	β	*t*	*p*	R^2	F	*p*	ΔR^2	ΔF	*p*
Step 1			.01	.20	3.43	.01			
Empathy	-.43	-3.77	.001						
Secure	.07	.59	.56						
Fearful	-.01	-.04	.97						
Preoccupied	.10	.85	.40						
Dismissive	-.07	-.65	.52						
Step 2			.03	.24	2.24	.03	.04	.52	.52
Empathy x secure	1.49	1.31	.19						
Empathy x preoccupied	-.60	-.40	.69						
Empathy x fearful	.35	.25	.80						
Empathy x dismissive	1.23	1.06	.29						

Note β= Standardised beta coefficient*, t*= t-test statistic*, p*=Significance value*,* R^2= R squared*, F*= Overall significance*,* ΔR^2= R squared changed, *ΔF*= Significant F change

Hierarchical regression analysis results for step 1 concluded a significant main effect for empathy (β= -.43, *t*=3.77, *p*< .001). A non-significant main effect was found for the secure adult attachment style (β=.07, *t*=.59, *p*=.56*),* fearful adult attachment style (β=-.01, *t*=-.04, *p*=.97*),* preoccupied adult attachment style

(β=.10, *t*=.85, *p=.40)* and the dismissive adult attachment style (β= -.07, *t*=-.65, *p*=.52).

Regression results for step 2 also found a significant main effect for empathy (β=-1.00, *t*= -1.87, *p*< .07). A non-significant main effect was found for the secure adult attachment style (β=1.49, *t*=1.31, *p=.*19), fearful adult attachment style (β=-.60, *t*=-.40, *p=.69),* preoccupied adult attachment style (β=.35, *t*=.25, *p=.*80*)* and the dismissive adult attachment style (β=1.23, *t*=1.06, *p*=.29*).*

Table 9 shows that the total amount of variance for stigma increased by a very little amount when interactive terms for empathy and adult attachment style were added (R^2=.24, ΔR^2= .04, ΔF (5.34) = .52, *p* = .03. At step 2, overall the ΔR^2 is not significant as the increase in R^2 was not significant and none of the interactive terms were significant at step 2 either. Concluding no moderation effects.

Discussion

Overall findings and comparison to Webb et al (2016) findings

The hypothesis for this study were replicated from the original study (Webb et al, 2016), however student and non-students (general population) participants were used within this study, to compare results. The first hypothesis for this study was that more stigma would be elicited from the vignette examining a severe and persistent mental health disorder (schizophrenia) than the vignette examining homelessness. The second hypothesis of this study was that

participants who self-reported greater levels of empathy would have lower levels of stigma no matter which vignette that they were allocated to. The final hypothesis of this study was that the relationship between stigma and empathy would be moderated via participant's adult attachment styles. Furthermore, the secure adult attachment style was hypothesised to have a multiplicative effect on the relationship between empathy and stigma. Producing the most empathy and least stigma, out of the four attachment styles.

The original study lacked support for the first hypothesis. Their results found that overall homelessness elicited the greatest amount of stigma, with severe psychological disorder, schizophrenia and bipolar disorder being next (Webb et al, 2016). Within this study partial support was found for the first hypothesis. The overall mean stigma scores for students and non-students on both vignettes produced minor differences. However, a 2x2 between subjects ANOVA produced significant main effects of status on stigma and the interaction between vignette and status on stigma was significant also. The non-students stigmatised the schizophrenia vignette more than the homeless vignette. Concluding some overall support for the first hypothesis. However, as students stigmatised homelessness more than schizophrenia, this produced a lack of support for the first hypothesis.

The clear difference in stigma tendencies of the student and non-student participants may suggest that stigma is complicated and varies throughout different subgroups of the population. Previous research has found clear differences in attitudes towards mental health between different cultural groups.

Asian Americans were found to have poorer attitudes towards mental health than Caucasians. Suggesting that differences in attitudes are prevalent amongst different cultural groups in society. However, further research is required to test differences in stigma tendencies amongst student and non-student participants rather than different cultures (Loya, Reddy, & Hinshaw, 2010).

Differences between the methods and populations used may account for the differences in findings of this study and the original (Webb et al, 2016). Both Psychology students and non-student participants took part within this study. Compared with just students in the original study of which their course type was not specified. In the original study the student's stigmatized homelessness more (Webb et al, 2016), whereas in this study students stigmatised homelessness more. It may be suggested that as psychology students have prior knowledge regarding mental health disorders like schizophrenia via their course content, it may have impacted their results. Providing an explanation for why students stigmatised the schizophrenia vignette less than the homeless vignette, and why the general population stigmatised schizophrenia more. Research does show that taught lessons on mental health disorders can increase empathy levels of students towards individuals with mental health disorders (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). With increased empathy levels being found to correlate with acceptance for individuals with mental health disorders and a decrease in stigma (Phelan & Basow, 2007). As the course type of students was not specified in the original study it cannot be confirmed if

it had an effect on their results. However, it may be suggested that support for the first hypothesis may have been found within in the original study (Webb et al, 2016), if they included both student and non-student (general population) participants. However, this can only be confirmed if tested.

The findings from the original study found support for the second hypothesis. Via correlational analysis stigma and empathy produced a significant and inverse relationship. Regression analysis also revealed that empathy significantly predicted stigma (Webb, et al, 2016). Within this study, results also found support for the second hypothesis. Correlation analysis found that empathy is significantly related to stigma, and regression analysis revealed a significant main effect for empathy on stigma.

Previous research does suggest that individuals with greater levels of empathy do have lower levels of mental health stigma (Phelan & Basow, 2007; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009) which may explain why both studies found that empathy significantly correlated to stigma.

As this study included both student and non-student participants the results are more generalizable to a wider population, compared with previous research which has mainly used student participants (Phelan & Basow, 2007; Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014).

Previous research suggests that prior knowledge and teaching participants about mental health disorders produces greater levels of empathy, and lower

levels of stigma (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). This may account for the findings within the study for the psychology students, as previously mentioned, their previous knowledge of mental health disorders may have impacted their increased levels of empathy. The original study also confirmed that at least half of the participants had previous exposure to mental health disorder's which may explain their findings (Webb et al, 2016).

As research within this area is limited there are not a lot of previous research findings to compare the results of both studies to in order to further interpret the findings.

The results in the original study did not support the third hypothesis. They found that empathy positively correlated to secure adult attachment and negatively to the fearful adult attachment style. This would suggest that the hypothesised relationship between empathy and stigma may be affected by participant's adult attachment style. However, their regression analysis suggested that no significant amount of variance was explained via the interaction effect between adult attachment style and empathy. Concluding that stigma is not significantly predicted by an interaction between adult attachment style and empathy (Webb et al, 2016).

Within this study the findings also lack support for the third hypothesis. Similarly to the original study's findings correlational analysis found a significant correlation between empathy and the secure adult attachment style. Alternatively, in the original study the total variance for stigma did not increase (Webb et al, 2016). However, within this study the total amount of variance for

stigma did increase when interactive terms for adult attachment style an empathy were added, but only by a very little amount. Although the trend was in the expected direction it was not a significant change, concluding lack of support for the final hypothesis.

Both studies found that empathy positively correlated to the secure attachment style (Webb et al, 2016), support for these findings may be found in previous research that suggests that individuals with secure attachment styles have greater empathy levels (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007), and stigmatise other people less (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016).

Furthermore, in both studies results found that stigma is not significantly predicted by an interaction between empathy and adult attachment style (Webb et al, 2016). Although previous research does suggest that adult attachment styles do have an effect on an individual's levels of empathy (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007), and stigma (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). There is a lack of research within this area overall. There is also a lack of research in terms of the third hypothesis, and linking the interaction between adult attachment style and empathy for predictions of stigma. Concluding that no previous research findings are available to compare the results to. This may suggest why results in both studies lacked support for the third hypothesis (Webb et al, 2016). Further research within this area is therefore required.

Another reason why results from this study and the original (Webb et al, 2016)

lack support for the final hypothesis may lie in the methodology used to measure attachment. A review has been conducted of multiple measures used to measure attachment, including The Relationship Questionnaire (Bartholomew & Horowitz, 1991) measure used within this study. Results found that overall attachment measures are not equally well validated. Researchers also point out that attachment measures differ in their correlates and emphases (Crowell & Treboux, 1995). Concluding that greater care is required when discussing the results of studies which use methods like The Relationship Questionnaire (Bartholomew & Horowitz, 1991).

Alternatively, self-report measures in general are questioned for their validity as researchers suggest that response bias and socially desirable responding occurs. Producing inaccurate findings (Van de Mortel, 2008). The validity of self-report attachment measures are also questioned by researchers. It is highlighted that strengths lie in participant's ability to self-report conscious feelings of their loving relationships. However, misrepresentations of biases of themselves can influence their self-report assessments of their attachment styles. Producing inaccurate self-reported findings (Jacobvitz, Curran & Moller, 2002). Therefore, a person may portray their relationship style in a more positive or negative light, via inaccurately answering self-report measures due to distortion. Leading to an inaccurate self-reporting of their attachment style. This may be an explanation for why the third hypothesis was not supported in this study and the original (Webb et al, 2016). If participant's actual attachment style was not self-reported, it would not have matched with their levels of

empathy to predict stigma. However this cannot be confirmed. Furthermore, researchers point out that within Bowlby's theory of attachment, it is specified that working models are industrialised via recurrent experiences with those individuals we are attached to, and that these are a filter for experiences later on in the relationship. However, if the representations are insecure, then specific data is barred from an individual's awareness. As they further progress in adaption to their attachment figures who are acting unresponsive towards them. Resulting in production of a protective strategy (Bretherton, 1985; Cassidy & Berlin, 1994; Crowell & Feldman, 1988; Main, 1981; Main, 1991: as cited in: Crowell & Treboux, 1995). Therefore implications may lie within the assessment of attachment based on the working models aspect of the theory. It may be proposed that when using self-reports to measure attachment, conscious feelings and perceptions of a participant's relationship are gained but the individual may not have direct awareness of their protective attachment strategies. Which may lead in an inaccurate self-reporting of their attachment style (Crowell & Treboux, 1995). This may account for why stigma was not significantly predicted by the interaction between empathy and adult attachment style in this study and the original (Webb et al, 2016). However, this cannot be confirmed.

Alternatively, lexical techniques or narrative methods to measure factors outside of an individual's consciousness are proposed as beneficial for measuring attachment working models, and an individual's attachment-specific behaviour (Crowell & Treboux, 1995). Therefore, if used within this study this

may have produced different findings. Which may be a suggestion for future research.

Findings linked to previous research

Stigma

Previous research on the stigma of mental health suggests that it occurs due to a lack of understanding from society (Rüsch, Angermeyer, & Corrigan, 2005). Diagnostic labels of mental health disorders are suggested to also cause greater stigma (Kroska & Harkness, 2008). Within this study non-student (general population) participants stigmatised schizophrenia more than homelessness. This may indicate support for research that suggests a lack of understanding from society of mental health disorders leads to stigma (Rüsch, Angermeyer, & Corrigan, 2005), however this cannot be confirmed as the participants understanding of mental health disorders was not measured.
It may be suggested that findings within this study support previous research that suggests that mental health diagnostic labels lead to stigma (Kroska & Harkness, 2008) as the general population stigmatised the schizophrenia vignette more than the homeless vignette, and it may have been because of the term 'schizophrenia' being used. As it is considered one of the most stigmatised disorders (Kim & Berrios, 200; Shulze & Angermeyer, 2003; Levin, 2006). However, the student participant's results lack support for this, as they stigmatised schizophrenia less than homelessness. Although specific research

testing Psychology student's level of stigma towards mental health is not currently available, it may be suggested that these findings support previous research that states prior understanding and involvement of mental health disorders leads to less prejudice and stigma (Corrigan, Edwards, Green, Diwan & Penn, 2001) as well as taught educational lessons (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). As psychology students are taught about mental health disorders within their educational programmes, this may have impacted their level of stigma towards the schizophrenia vignette. It would have been useful to include a measure of prior knowledge and experience of mental health within this study, in order fully evaluate if it did effect the findings.

It may also be suggested that students stigmatising schizophrenia less is a reflection of their socioeconomic status, and that they have less contact with people who are suffering homeless. Leading to increased stigma towards homelessness rather than schizophrenia. However, this cannot be confirmed as prior contact with homeless individual was not measured.

Previous research on mental health stigma have predominantly used vignettes as their methodology (Jorm & Wright, 2008; Corrigan, Lurie, Goldman, Slopen, Medasani, & Phelan, 2005; Rose, Thornicroft, Pinfold, & Kassam, 2007; Reavley & Jorm, 2011), with some finding that a schizophrenia vignette elicits more stigma than other mental health disorders (Reavley & Jorm, 2011). A schizophrenia vignette being the chosen methodology within this study, may account for why similar findings to previous studies were found in terms of the general population stigmatising schizophrenia more than homelessness.

However this does not support the findings for the student participants who stigmatised schizophrenia less.

Adult attachment and empathy

Previous research suggests that there is a link between empathy and adult attachment. With empathy being proposed as an essential requirement to be able to provide a secure base for the people close to us (Britton & Fuendeling, 2005). Individuals with secure attachment styles are also reported to have greater empathy levels overall (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007). Findings within this study do support this, as empathy positively correlated to the secure attachment style.

The use of self-report measures within this study and within previous research may account for the similarity in findings. Further suggesting that self-report measures of adult attachment and empathy may be reliable measurements (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007).

Previous researchers within this area have used student populations only (Trusty, Ng, Watts, 2005; Wayment, 2006; Laible, 2007) and this study used both students and the general population. Despite this difference in sample, findings were the same. This may suggest that the link between empathy and secure adult attachment is prevalent despite other factors such as status.

Empathy did positively correlate to the secure attachment style within this study for the homeless vignette but not the schizophrenia vignette. This finding may be rooted in the random variation of vignette to participants, and be an

indication that random assignment did not work as well as it could have. It is also important to recognise that the effect size of significance would differ due to only half of the participants receiving each of the vignettes.

Previous research does highlight a lack of agreement regarding empathy as a construct (Aragona, Kotzalidis & Puzella, 2013; Webb et al 2016), which has led to empirical difficulties and theoretical misunderstandings (Duan & Hill, 1996). This would suggest that empathy is problematic to measure, if researchers are not fully aware what empathy is, or what they are measuring. However, it must be highlighted that based on the original study (Webb et al, 2016), a clear definition of empathy was used within this study. Empathy was defined as; “a cognitive-affective construct that helps individuals relate to another’s thoughts, feelings and experiences” (Webb et al, 2016, p.65). Therefore, researchers were clearly aware of what they were measuring. Furthermore, the empathy measure used within this study (Wakabayashi et al, 2006) has been validated by other researchers concluding that it has acceptable test-retest reliability (Guan, Jin & Qian, 2012). Within the original study that the empathy measure was developed the Cronbach’s Alpha was .88 (Wakabayashi et al, 2006), in the replication study it was .81 (Webb et al, 2016), and for this study it was .84. All three results being similar suggest that the internal reliability of the measure was good, and that all of the questions were measuring empathy. This may be another reason for why results within this study support previous research.

Adult attachment and stigma

Previous research is limited that investigates a link between adult attachment styles and mental health stigma (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). With some research findings suggesting that the stigma of mental health can be amplified via attachment styles (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015), secure attachment styles have lower stigma tendencies, and fearfully attached individuals having higher stigma tendencies for psychological difficulties (Gencoglu, Topkaya, Sahin, & Kaya, 2016). However, results within this study found that none of the adult attachment styles positively correlated with stigma for both students and non-students (general population) on both vignettes. Furthermore, total variance for stigma did not increase significantly when interactive terms for adult attachment style and empathy were added. Previous research being limited in this area results in a lack of research findings to compare the results with. Further suggesting that the evidence for a link between attachment styles and mental health stigma is weak. Suggesting a reason why the findings in the study do not support previous research findings.

Despite previous research using the same self-report methodology (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016) the same findings were not found. As previously mentioned, self-report measures are successful in producing results of empathy positively

correlating to the secure attachment style (Wayment, 2006; Laible, 2007). However, results in this study may suggest that self-report measures are not strong enough to measure how attachment styles relate to stigma. As also previously mentioned, the validity of self-report measures for attachment is questioned due to misrepresentations in self-reporting, producing inaccurate self-report attachment styles. Ultimately effecting the overall results of studies (Jacobvitz, Curran & Moller, 2002). This may have also influenced results within this study.

Another reason why findings within this study do not support previous research findings may be due to the location. This study was conducted in the United Kingdom, and previous research has been conducted in Turkey (Gencoglu, Topkaya, Sahin, & Kaya, 2016) and Canada (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Previous findings are therefore not representable for other countries (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015; Gencoglu, Topkaya, Sahin, & Kaya, 2016). Further suggesting that the effect of attachment styles on stigma may differ between cultures. However this cannot be confirmed until more research is conducted in more countries. Researchers conducting cross-cultural comparisons of attachment style measures of Turkish and American participants did find that overall attachment styles do differ between cultures. Their results also highlighted that The Relationship Questionnaire (Bartholomew & Horowitz, 1991) was not consistent for measuring attachment across two cultures (Sumer & Gungor, 1999). This may further suggest that the attachment measure may have not been able to

consistently measure the attachment style of the United Kingdom culture. Furthermore, if the measure was not able to consistently measure attachment styles, it would have been able to accurately assess how participant's attachment styles correlated with stigma.

Previous researchers within this research area have used student populations only (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Within this study both student and non-student (general population) participants were used. It was confirmed that the members of the general population were not students, however their level of education was not measured. This may suggest that the effect of attachment style on stigma may only be prevalent for individuals with a greater level of education. Different results may have been produced if only a student population was used, as in previous research (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). However, this cannot be confirmed due to the education level of non-students not being measured. Although they were not currently students, they may have gained great levels of education previously.

Cohort effects may have also contributed to this. Cohort effects are also known as period effects, these period effects are experienced by participants via age-specific exposure. As well predisposition to the effect (Keyes, Utz, Robinson & Li, 2010). As the non-student (general population) participants within this study were predominantly aged above 50 and from a working class background. Although it cannot be confirmed, it may be suggested that the student population may have differed in age range, consisting of predominantly younger participants. It can be further suggested that due to age, it is more likely that the

non-student participants (general population) have had less access to education/ University. This is due to education expanding in the United Kingdom within the last few decades, and access not being equally distributed amongst both the rich and poorer people (Blanden & Machin, 2004; Greenaway & Haynes, 2003). However, this cannot be confirmed due to the level of education of the general population not being measured. Currently there is no available research that investigates a link between education level and attachment style, therefore this may be a suggestion for future research.

Another reason for why the findings within this study do not support previous research findings may be due to 42 out of the 80 participants identifying themselves as securely attached (A) (more than 50% of participants), and the dismissive attachment style (D) being identified with the least. Previous research does suggest that dismissively attached individuals are more likely to stigmatise mental health (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Therefore, the lack of variation in attachment style of participants may be why a link between attachment styles and stigma was not found.

Empathy and stigma

Within this study results found that empathy significantly correlated to stigma, and regression analysis concluded a significant main effect for empathy on stigma for all participants (general population and students). These findings support previous research that shows that greater levels of empathy result in

lower levels of stigma (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Phelan & Basow, 2007). The similarity in findings may be due to the same self-report methodology (Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009) vignettes and questionnaires (Phelan & Basow, 2007) being used. Suggesting that strengths lie within the methodology for measuring empathy and stigma levels.

It has been suggested that complications in defining empathy has caused a lack of research in this area (Aragona et al, 2013; Dziobek, 2012; Welker, 2005, as cited in: Webb et al 2016). Further suggesting that overall research findings may lack strength, if researchers are not fully aware of what they are measuring, in terms of empathy.

Another finding within this study was that empathy positively correlated to stigma for both the general population (non-students) and psychology students. Furthermore, students stigmatised schizophrenia less than homelessness. This may support previous research that has used simulation techniques (Ando, Clement, Barley & Thornicroft, 2011; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014) and taught lessons (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009) on student populations to increase empathy, and found positive a decrease in mental health stigma (Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009). As previously mentioned, psychology students are taught about mental health disorders. This may have increased their empathy levels towards mental health disorders and led to a

decrease in stigma.

Although previous research within this area has only used student populations (Phelan & Basow, 2007; Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009; Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014) a significant main effect for empathy on stigma was found for the general population too. This suggests that empathy correlates to stigma for the wider population also. Concluding that further research is required within this area that employs a wider range of participants from different populations.

Furthermore, previous research has found that simulation techniques have led to an increase in social distance from individuals with mental health disorders (Ando, Clement, Barley & Thornicroft, 2011) suggesting that an increase in empathy may not always decrease levels of mental health stigma. Although this finding was not found within this study, this finding in previous research combined with the lack of research within this area overall is questionable. It highlights that research is still within its premature stages and requires further investigation.

Methodological issues, limitations and strengths

As recruitment included both Psychology students and non-students (general population), it was quite time consuming to collect data. Alternatively it can be considered a strength as the researcher was able to target specifically; psychology students and the general population. This enabled a comparison to be made between the results of both participants types, which is not available in current research.

Eighty participants were gained for this study which is relatively low as 347 participants were gained for the original study that was replicated (Webb et al, 2016). Researchers highlight that a lot of quantitative studies do not have a definite sample size obligation. However, sample size calculation is still a very important step of scientific studies, for generalisability and in order for the researcher to be confident on how representative the findings are. As insufficient sample size can lead to an inability to approximate frequencies of events or demonstrate anticipated differences, it can also be considered ethically unacceptable (Martínez-Mesa, González-Chica, Bastos, Bonamigo, Duquia, 2014). The smaller sample size of 80 may have also been too small for the multiplicative multiple regression analysis, which is suggested to generally require larger sample sizes for adequate amounts of statistical power (University of Nebraska-Lincoln, n.d.).Therefore, there may be a statistical power problem in the areas that significant results were not found. These being the non-significant main effects for all of the attachment styles for both steps of the regression analysis.

To combat this in future research, data collection should start earlier and be conducted for a longer period of time in order to gain a greater number of participants.

Alongside this, as previously mentioned, over 50% of participants identified themselves as securely attached (A) and it is suggested in previous research that the dismissively attached individuals stigmatise mental health more (Zhao, Young, Breslow, Michel, Flett, & Goldberg, 2015). Therefore this lack in distribution of attachment styles may have affected the results in terms of the third hypothesis, and concluding if empathy predicted stigma and if the relationship was moderated by participant's attachment style. Future research should aim to obtain a larger number of participants, with the aim of recruiting a more varied amount of participants from each attachment style.

As psychology students were a population within this study it may be suggested that demand characteristics may have taken place. Demand characteristics are when a participant is able to hypothesise the actual purpose of a study, and then change their responses/behaviour based on this (Orne, 1962). As psychology students have knowledge on psychological experiments and deception as well as the topics studied within the research, they may have been able to fathom what the actual aim of the research was and altered their responses accordingly. However, this cannot be confirmed as participants were not asked.

Alternatively, as mentioned above it may be suggested that cohort effects may have occurred within this study. As the non-student (general population)

participants were predominantly aged 50 plus, it could be argued that they may have had greater life experience due to maturation. This may have led to greater experience of individuals with mental health disorders, affecting their stigma tendencies. This cannot be confirmed as prior experience was not measured for all types.

Another important point to highlight is that all participants answered the questionnaires in the same order. Participants completed attachment and empathy measures before they read the vignette, and completed the stigma measure last. It may be suggested that if participants read the vignette first, and completed the stigma measure before the attachment and empathy questionnaires then their stigma responses may have differed. Participants may have been able to comprehend what was actually being measured in terms of mental health stigma. Future research could test this via changing the order of the questions for some participants but not all, to make comparisons in stigma results.

With regards to ethics, deception did occur for the purpose of this study. However, participants were immediately informed of the real aim of the study within the debrief and provided with support organisation contact details. The deception was also passed by the Ethics Committee within the University of Chester. Although deception may be deemed morally wrong, research does show that participants taking part in deception experiments enjoy them more than non-deceptive experiments. Reasons being due to educational benefit and not minding being deceived (Christensen, 1988). Concluding overall, that

although there may be risks of harm, deception research can also be beneficial for participants.

A limitation to this study lies in how the data was collected. All of the student participant's data collection occurred online and the non-students (general population) data collection occurred in person. Resulting in more student participants being gained via the ease of online data collection, and less non-student participant's due to time restrictions. It was time consuming and difficult for participants to arrange an adequate time for meeting the researcher and completing the measures in person. However, despite this slight limitation there were very minor differences in the amount of student and non-student (general population) participants overall. With there being 43 students and 37 non-student participants (general population), which can be considered as an overall strength to this research.

As mentioned previously, the findings of self-report measures are questioned in regards to socially desirable responding (Van de Mortel, 2008). The validity of using self-report measures for attachment is also questioned in particular (Fisher, 1993; Jacobvitz, Curran & Moller, 2002). However, the Empathy quotient-short Form (Wakabayashi et al, 2006) and The Relationship Questionnaire (Bartholomew & Horowitz, 1991) measures used are validated measures (Scharfe & Bartholomew, 1994; Sumer & Gungor, 1999; Guan, Jin & Qian, 2012), and attachment styles have been found to remain stable over time (Scharfe & Bartholomew, 1994).

The Relationship Questionnaire (Bartholomew & Horowitz, 1991) has been

proposed as inconsistent for measuring attachment styles across cultures (Sumer & Gungor, 1999). Furthermore, it is also stated above that due to the internal working models aspect of attachment theory, participants are not always aware of underlying protective strategies that they may possess within their attachment styles. Resulting in inaccurate self-reporting (Crowell & Treboux, 1995). Suggesting that participants may have not accurately self-reported their attachment styles within this study.

An alternative qualitative interview approach could have been used to measure attachment within this study, to aim to combat these limitations. The reliability of the Adult Attachment Interview has been tested by researchers (George, Kaplan, and Main, 1985; as cited in Bakermans-Kranenburg & Van IJzendoorn, 1993), and results were found to remain reliable over time (Bakermans-Kranenburg & Van IJzendoorn, 1993). Alternatively, measures of attachment have been reviewed and although the Adult Attachment Interview (George, Kaplan, and Main, 1985; as cited in Crowell & Treboux, 1995) is proposed to have great discriminant validity, it has been found to lack a connection to feelings of worry (Crowell & Treboux, 1995). Interview techniques would also be more time consuming. Suggesting overall, that both quantitative and qualitative measures of attachment have both strengths and limitations.

The Cronbach's alpha test was performed for the Empathy quotient-short Form (Wakabayashi et al, 2006) and The Relationship Questionnaire (Bartholomew & Horowitz, 1991). It must be highlighted that the Cronbach's Alpha only measures the extent of which the items in a questionnaire all measure the same

construct or concept. Therefore relating only to the inter-relatedness of the questions (Tavakol & Dennick, 2011). The Cronbach's Alpha results inform us that the empathy and stigma measures within this study have good internal reliability and that the questions are reliable for measuring the stigma and empathy. However it does not inform of us of the re-test reliability. Further suggesting that if the same empathy and stigma measures were used on participants a month after the study, or if a participant's friend/family member completed the measures on their behalf, results may have differed. Questioning the inter-rater reliability of the empathy and stigma findings within this study.

A limitation within this study mentioned previously, may be that previous research highlights a lack of agreement regarding empathy as a construct (Aragona, Kotzalidis & Puzella, 2013; Webb et al 2016). This may have affected the comparison between the findings within this study and previous research findings, if previous researchers were not accurately aware of what they were measuring. However as stated above a clear definition of empathy was used within this study and researchers were very aware of what they were aiming to measure. Alternatively, if other measures were used to measure empathy, differing results may have been produced.

Differences between the methods and populations within this study to the study replicated (Webb et al, 2016) may account for differences in findings. Firstly, the original study used five vignette explanations, (a) schizophrenia (b) bipolar disorder (c) Alzheimer's disease (d) a severe psychological disorder and (e) homelessness, however within this study only (a) Schizophrenia and (b)

homelessness behaviour explanations were used for the vignettes. This was done to simplify the study due to not being able to gather a similar quantity of participants to the original study (Webb et al, 2016). The difference in methodology may produce questions within the research findings of the participant's stigma tendencies. For example, findings suggested that the non-student (general population) participants were stigmatising schizophrenia more than homelessness. Firstly, it could be questioned if their tendency to stigmatise was specific to mental health. Secondly, if they would have stigmatised other health conditions like Alzheimer's the same of differently. In future research, other psychosocial and health explanations for the vignettes alongside a larger sample size is needed, to gain a better insight into the stigma tendencies of the participants more specifically.

Overall strengths lie in the research findings of this study. The results closely replicated the findings of the original study replicated (Webb et al, 2016). However, new research area of comparing student and non-student (general population) participants was investigated within this study. This produced interesting findings and clear differences in stigma tendencies between students and non-students (general population). Highlighting a need for further research within this area.

Implications for practice

Results within this study found that empathy is related to stigma and previous research suggests that training techniques for increasing empathy can lead to reduced levels of mental health stigma (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Ando, Clement, Barley & Thornicroft, 2011; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014). This may suggest a need for training interventions within this area, to reduce levels of mental health stigma in society today. The general population within this study stigmatised mental health more than psychology students. This further supports the suggestion that training interventions and prior understanding of mental health disorders can be a crucial technique for reducing stigma (Naylor, Cowie, Walters, Talamelli & Dawkins, 2009; Ando, Clement, Barley & Thornicroft, 2011; Brown, 2014; Doolen, Giddings, Johnson, Guizado de Nathan, & O Badia, 2014). It is also important to highlight that simulation techniques have not always proven successful in reducing mental health stigma (Ando, Clement, Barley & Thornicroft, 2011), despite currently being the most common used method. Signifying that other techniques like taught lessons may be a more useful technique, however this can only be confirmed once more research is conducted within this area.

Implications within this study for future research

A key finding within this study was the differences in stigma tendencies between Psychology students and non-students (general population). This highlights a need for educational interventions. As well as a requirement to teach individuals about mental health disorders, with an aim of reducing stigma. Future research should further investigate the stigma of mental health via comparing students who are taught about mental health disorders with the general population. This will determine if prior knowledge and training does lead to reduced levels of stigma.

Overall, minor research has been produced, on how the relationship between empathy and stigma can be moderated via their attachment styles. Signifying further research is required within this area overall. This study and the original study (Webb et al, 2016), found that empathy significantly correlated to the secure attachment style. Furthermore, during regression analysis within this study, total variance for stigma did increase by a little amount when interactive terms for adult attachment style an empathy were added. This does suggest that the hypothesised relationship between empathy and stigma may be influenced by adult attachment style but other factors may have effected results. These factors being sample size, and also variation of attachment style within the sample, with most participants identifying themselves as securely attached. Future research should be conducted with a predominantly larger sample, to gain more participants from the dismissive attachment style which is suggested to be more problematic for mental health stigma (Zhao, Young, Breslow, Michel,

Flett, & Goldberg, 2015), This may determine if participants adult attachment style does moderate the relationship between their empathy and stigma levels, and in particular the stigma of mental health.

Conclusion

The findings within this study were similar to the findings of the Webb et al (2016) study replicated. Concluding that stigma is a complex construct, combining many facets, due to the replication of findings (Webb et al, 2016).

Results in this study suggest that empathy is a significant predictor of stigma. Although hierarchical regression analysis concluded a significant main effect for empathy on stigma. Results do suggest that adult attachment style may not moderate the relationship between empathy and stigma. Further research is required within this area and may reveal different findings.

Another key finding within this study was the difference in stigma tendencies between students and non-students (general population). This further suggests that intervention training techniques and prior knowledge may be beneficial for reducing mental health stigma.

Overall findings within this study encourage future research to investigate how adult attachment styles and empathy levels may impact on the stigma elicited towards mental health disorders. Paying particular attention to a comparison between the stigma tendencies of students (with prior knowledge), and the general population. Findings may help those individuals with mental health disorders to experience less stigma, and live a more fulfilling life.

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Appendices

Appendix A: Information sheet for student participants

Participant Information Sheet:
Different reactions to people in social situations

You are being invited to take part in a research study. Please read all of the information below regarding details of the study before deciding whether to take part or not. Seek advice from others if you feel that it is required and do not hesitate to ask for further information if there is anything that you do not understand. Thank you for taking time to read this.

Purpose of the study

The aim of the study is to determine how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues.

Why have I been chosen to take part?

You have been invited to take part as you are registered on an undergraduate or postgraduate Psychology course at the University Of Chester.

What do I have to do if I decide to take part?

You would be asked to complete an empathy quotient-short form in order to assess your level of empathy. You will be asked to complete a relationship questionnaire in order to determine what kind of adult attachment style you fit with.

Finally, you will be asked to read a short description of a particular social situation and you will be asked how you think you might think and feel in that situation

What transpires if you do not want to take part or if you change my mind?

Participation in this study is completely voluntary. At the beginning of the study you will read a statement on the online Bristol survey informing you that if you are happy to take part then please proceed with the experiment. This will be a form of consent. However, you do not have to answer all of the questions within the study. You are free to leave the study at any point and withdraw your participation by closing the online browser and your data will not be used within this study.

Confidentiality

All data is stored anonymously.

What happens with my results?

All data will be obtained using the RPS anonymous system. At the end of the study this data will be inputted into SPSS for further data analysis to be used within a dissertation project.

What are the risks and benefits involved within the study?

The benefit of taking part within this study is that you will obtain 2 RPS credits. The risk of taking in this study is that you will be asked personal questions about your relationships with other people and how you to respond to others in social situations. If you feel that this may be an upsetting experience for you then you are advised to not take part.

What is the expected time frame of the study?

The study will take approximately 30 minutes to complete.

Where will the research take place?

The study can be completed on any computer that has access to the RPS system. The choice of where you wish to complete the study is totally yours. It is suggested for you to complete this study in a quiet environment, where other people are unable to view observe your answers.

Will the results be published?

The data obtained from this study will be inputted in SPSS for further analysis in order to generate means, standard deviations and appropriate inferential statistics. This will then be used within a dissertation project that will be handed into the Chester University Psychology department. Your identity will not be disclosed as all data is reported anonymously.

Staff details of those conducting the research

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Dissertation supervisor: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

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01244 511477

What do you do if you feel unhappy after taking part in the study?

The student support service is located in the Binks building of Chester University Parkgate Road Campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. If taking part in this study makes you aware that you are experiencing distress in your own personal life then it may be advisable for you to contact your PAT or student support. If this does not resolve the issue for you then it may be advisable for you to contact your GP. Alternatively you may wish to contact the Samaritans helpline for advice, you can email them at jo@samaritans.org or call them on 116 123.

Appendix B: Non-student (general population) participant's information sheet

Participant Information Sheet:
Different reactions to people in social situations

You are being invited to take part in a research study. Please read all of the information below regarding details of the study before deciding whether to take part or not. Seek advice from others if you feel that it is required and do not hesitate to ask for further information if there is anything that you do not understand. Thank you for taking time to read this.

Purpose of the study

The aim of the study is to determine how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues.

Why have I been chosen to take part?

You have been invited to take part as you are a family member or friend.

What do I have to do if I decide to take part?

You would be asked to complete an empathy quotient-short form in order to assess your level of empathy. You will be asked to complete a relationship questionnaire in order to determine what kind of adult attachment style you fit with.

Finally, you will be asked to read a short description of a particular social situation and you will be asked how you think you might think and feel in that situation

What transpires if you do not want to take part or if you change my mind?

Participation in this study is completely voluntary. By filling in and returning the questionnaire, you will be giving your consent to be part of this study. You do not have to answer all of the questions within the study. You are free to leave the study at any point up to the point where you hand your questionnaire back to me. If you do choose to leave the study, you can simply destroy any part-completed questionnaire or you can simply write 'withdraw' across the top of the questionnaire, put it in the envelop and hand it back to me. In this case, your answers will not be used.

Confidentiality

All data is stored anonymously.

What happens with my results?

All data will be obtained from the handwritten questionnaires which will be totally anonymous. At the end of the study this data will be inputted into SPSS which is a statistical software for further data analysis to be used within a dissertation project.

What are the risks and benefits involved within the study?

The benefit of taking part within this study is that you may enjoy taking part within a psychology experiment. The risk of taking in this study is that you will be asked personal questions about your relationships with other people and how you to respond to others in social situations. If you feel that this may be an upsetting experience for you then you are advised to not take part.

What is the expected time frame of the study?

The study will take approximately 30 minutes to complete.

Where will the research take place?

The choice of where you wish to complete the study is totally yours. It is suggested for you to complete this study in a quiet environment, where other people are unable to view observe your answers.

Will the results be published?

The data obtained from this study will be inputted into SPSS for further analysis in order to generate means, standard deviations and appropriate inferential statistics which are required to analyse the results. This will then be used within a dissertation project that will be handed into the Chester University Psychology department. Your identity will not be disclosed as all data is reported anonymously.

Staff details of those conducting the research

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Dissertation supervisor: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

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What do you do if you feel unhappy after taking part in the study?

If taking part in this study makes you aware that you are experiencing distress in your own personal life then it may be advisable for you to contact any members of your family or friends that you feel can support you. If this does not resolve the issue for you then it may be advisable for you to contact your GP. Alternatively you may wish to contact the Samaritans helpline for advice, you can email them at jo@samaritans.org or call them on 116 123.

Appendix C: Student participants debrief

Debrief

First of all thank you for taking part within this study!

When agreeing to take part in this study you read a participant information sheet that stated you were going to be taking part in a study to determine the effects of adult attachment and empathy on responses to individuals in social situations regarding social, religious and health issues.

This study actually investigated the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders and was a replication of the Webb, et al (2016) study. As research suggests that empathy may reduce stigma and adult attachment may have an influence on stigma, these research ideas were explored further.

Deception took place within this study as it was necessary to ensure that prior knowledge did not affect the results obtained.

If you have any further questions regarding this study then do not hesitate to contact the research team.

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

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Furthermore if you feel that you have any concerns or feel any distress due to any part of this study then the student support team is located within the Binks building of Chester University, Parkgate Road campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. Furthermore you may wish to speak to your tutor or contact a GP if you feel necessary. Alternatively you can contact the Samaritans helpline for support and advice, you can email them at jo@samaritans.org or call them on 116 123.

Thank you once again for taking part in this study.

Appendix D: Non-students (general population) debrief from

University of Chester

Debrief

First of all thank you for taking part within this study!

When agreeing to take part in this study you read a participant information sheet that stated you were going to be taking part in a study to determine the effects of adult attachment and empathy on responses to individuals in social situations regarding social, religious and health issues.

This study actually investigated the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders and was a replication of the Webb, et al (2016) study. As research suggests that empathy may reduce stigma and adult attachment may have an influence on stigma, these research ideas were explored further.

Deception took place within this study as it was necessary to ensure that prior knowledge did not affect the results obtained.

If you have any further questions regarding this study then do not hesitate to contact the research team.

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

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Furthermore if you feel that you have any concerns or feel any distress due to any part of this study then it may be advisable for you to speak to friends or family who can support you. Furthermore you may wish to contact a GP if you feel necessary. Alternatively you can contact the Samaritans helpline for support and advice, you can email them at jo@samaritans.org or call them on 116 123.

Thank you once again for taking part in this study.

Appendix E: Wakabayashi et al (2006) Empathy quotient-short Form:

1. I can easily tell if someone else wants to enter a conversation.

3. I really enjoy caring for other people.

4. I find it hard to know what to do in a social situation.

8. I often find it difficult to judge if something is rude or polite.

9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.

11. I can pick up quickly if someone says one thing but means another.

12. It is hard for me to see why some things upset people so much.

13. I find it easy to put myself in somebody else's shoes.

14. I am good at predicting how someone will feel.

15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.

18. I can't always see why someone should have felt offended by a remark.

21. I don't tend to find social situations confusing.

22. Other people tell me I am good at understanding how they are feeling and what they are thinking.

26. I can easily tell if someone else is interested or bored with what I am saying.

28. Friends usually talk to me about their problems as they say that I am very understanding.

29. I can sense if I am intruding, even if the other person doesn't tell me.

31. Other people often say that I am insensitive, though I don't always see why.

34. I can tune into how someone else feels rapidly and intuitively.

35. I can easily work out what another person might want to talk about.

36. I can tell if someone is masking their true emotion.

38. I am good at predicting what someone will do.

39. I tend to get emotionally involved with a friend's problems.

<u>4- Point Likert scale to be used:</u>

1 (Strongly disagree)
2 (Disagree)
3 (Agree)
4 (Strong Agree)

Appendix F: Bartholomew & Horowitz (1991) Relationship questionnaire

Scale:

Following are four general relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style.

Style

Style A

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style B

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style C

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style D

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Appendix G: Vignette

Vignettes and Stigma Items

Imagine you are at the local library. You hear a disturbance near one of the bookshelves. You turn and see a woman trying to calm a man who appears agitated. The man's hair is uncombed and his clothing is dishevelled. He yells to the woman that people want to hurt him. After a couple minutes, the man calms down. He and the woman quietly leave the library together. Later, as you check out your books from the library, the librarian tells you that the man who was upset has (schizophrenia / lost his home and is living in his car).

Appendix H: Vignette stigma statement items

Now consider each of the following statements. How much do you agree with each statement?

I feel afraid.

This man might be dangerous.

I think this man could have controlled his feelings and chosen to remain calm.

This man shows lack of faith in God.

The librarians should keep people with these problems out of the library.

This man might be influenced by demonic forces.

No one in my family could ever have this sort of problem.

I could never have this sort of problem.

I feel compassion for this man*

I want to learn more about this type of problem this man has*

This man has done nothing to cause his problems*

Note. * Signifies reverse scored items. Participants were asked to rank each item for stigma on a 5-point Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strong Agree)*.

Appendix I: University of Chester Research participation system advertisement

Abstract: This is an online study aiming to determine how adult attachment and empathy levels affect responses to people in social situations regarding, religious, social and health issues.

Description: You are invited to take part in this online research study investigating if adult attachment and empathy levels affect the way people respond to others in social situations regarding religious, social and health matters. The study will include completion of two initial empathy and relationship questionnaires. Then you will be asked to read a short paragraph of a social situation, then complete a final questionnaire based on how that might have made you feel in that situation. The results will enable us to further understand the effects of attachment and empathy and reactions to people in different social situations. As the questions will ask you about personal relationships, distress may arise. You do not have to answer all of the questions and are free to withdraw at any point, simply by closing the web browser. Your data will then not be used in the study. This study will take up to 30 minutes to complete and will give you 2 RPS credits.

Appendix J: Facebook advertisement

As part of my PS7112 Research Dissertation module I am looking for Psychology students to take part in my study. The study aims to investigate adult attachment and empathy effects on reactions to people in different social situations. If this interests you then please email me at 1620687@chester.ac.uk. Thank you.

Appendix K: Frequency listings for all variables

Frequencies

Notes

Output Created		02-AUG-2017 13:53:37
Comments		
Input	Data	C:\Users\trace\Desktop\ANALYSIS DATA\ORIGINAL DATA FILE BEFORE REVERSE SCORING\final merged data (6).sav
	Active Dataset	DataSet1
	File Label	File created by user 'bos2' at Wed Jul 26 10:59:18 2017
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q2 Q2_a Q2_b Q2_c Q2_d /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Statistics

		General relationship style	____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.
N	Valid	80	79	78	78	78
	Missing	0	1	2	2	2

Frequency Table

General relationship style

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	42	52.5	52.5	52.5
	B	22	27.5	27.5	80.0
	C	5	6.3	6.3	86.3
	D	11	13.8	13.8	100.0
	Total	80	100.0	100.0	

____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Not at all like me	10	12.5	12.7	12.7
	2)	1	1.3	1.3	13.9
	3)	5	6.3	6.3	20.3
	4) Neutral mixed	14	17.5	17.7	38.0
	5)	13	16.3	16.5	54.4
	6)	12	15.0	15.2	69.6
	7) Very much like me	24	30.0	30.4	100.0
	Total	79	98.8	100.0	
Missing	System	1	1.3		
Total		80	100.0		

____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Not at all like me	14	17.5	17.9	17.9
	2)	8	10.0	10.3	28.2
	3)	4	5.0	5.1	33.3
	4) Neutral mixed	20	25.0	25.6	59.0
	5)	10	12.5	12.8	71.8
	6)	9	11.3	11.5	83.3
	7) Very much like me	13	16.3	16.7	100.0
	Total	78	97.5	100.0	
Missing	System	2	2.5		
Total		80	100.0		

____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Not at all like me	22	27.5	28.2	28.2
	2)	15	18.8	19.2	47.4
	3)	6	7.5	7.7	55.1
	4) Neutral mixed	17	21.3	21.8	76.9
	5)	11	13.8	14.1	91.0
	6)	4	5.0	5.1	96.2
	7) Very much like me	3	3.8	3.8	100.0
	Total	78	97.5	100.0	
Missing	System	2	2.5		
Total		80	100.0		

____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Not at all like me	13	16.3	16.7	16.7
	2)	9	11.3	11.5	28.2
	3)	7	8.8	9.0	37.2
	4) Neutral mixed	19	23.8	24.4	61.5
	5)	13	16.3	16.7	78.2
	6)	6	7.5	7.7	85.9
	7) Very much like me	11	13.8	14.1	100.0
	Total	78	97.5	100.0	
Missing	System	2	2.5		
Total		80	100.0		

Empathy frequencies

Frequencies

Notes

Output Created		02-AUG-2017 13:46:05
Comments		
Input	Data	C:\Users\trace\Desktop\ANALYSIS DATA\ORIGINAL DATA FILE BEFORE REVERSE SCORING\final merged data (6).sav
	Active Dataset	DataSet1
	File Label	File created by user 'bos2' at Wed Jul 26 10:59:18 2017
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.

Syntax		FREQUENCIES VARIABLES=Q1 Q1_a Q1_a_i Q1_a_ii Q1_a_iii Q1_a_iv Q1_a_v Q1_a_vi Q1_a_vii Q1_a_viii Q1_a_ix Q1_a_x Q1_a_xi Q1_a_xii Q1_a_xiii Q1_a_xiv Q1_a_xv Q1_a_xvi Q1_a_xvii Q1_a_xviii Q1_a_xix Q1_a_xx /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.04

	1. I can easily tell if someone else wants to enter a conversation.	3. I really enjoy caring for other people	4. I find it hard to know what to do in a social situation.	8. I often find it difficult to judge if something is rude or polite.	9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might																	

					bethinking.																	
N	Valid	80	80	80	80	80																
	Missing	0	0	0	0	0																

Statistics

	11. I can pick up quickly if someone says one thing but means another.	12. It is hard for me to see why some things upset people so much.	13. I find it easy to put myself in somebody else's shoes.	14. I am good at predicting how someone will feel.	15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.												
N Valid	79	80	80	78	79												
Missing	1	0	0	2	1												

Statistics

		18. I can't always see why someone should have felt offended by a remark.	21. I don't tend to find social situations confusing.	22. Other people tell me I am good at understanding how they are feeling and what they are thinking.	26. I can easily tell if someone else is interested or bored with what I am saying.	28. Friends usually talk to me about their problems as they say that I am very understanding.							
N	Valid	80	80	80	80	80							
	Missing	0	0	0	0	0							

Statistics

	29. I can sense if I am intruding, even if the other person doesn't tell me.	31. Other people often say that I am insensitive, though I don't always see why.	34. I can tune into how someone else feels rapidly and intuitively.	35. I can easily work out what another person might want to talk about.	36. I can tell if someone is masking their true emotion.		

N	Valid	80	80	80	79	80		
	Missing	0	0	0	1	0		

Statistics

		38. I am good at predicting what someone will do.	39. I tend to get emotionally involved with a friend's problems.
N	Valid	80	80
	Missing	0	0

Frequency Table

1. I can easily tell if someone else wants to enter a conversation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	1	1.3	1.3	1.3
	2) Disagree	6	7.5	7.5	8.8
	3) Agree	48	60.0	60.0	68.8
	4) Strongly agree	25	31.3	31.3	100.0
	Total	80	100.0	100.0	

3. I really enjoy caring for other people

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	2	2.5	2.5	2.5
	2) Disagree	5	6.3	6.3	8.8
	3) Agree	39	48.8	48.8	57.5
	4) Strongly agree	34	42.5	42.5	100.0
	Total	80	100.0	100.0	

4. I find it hard to know what to do in a social situation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	20	25.0	25.0	25.0
	2) Disagree	38	47.5	47.5	72.5
	3) Agree	18	22.5	22.5	95.0
	4) Strongly agree	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

8. I often find it difficult to judge if something is rude or polite.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	26	32.5	32.5	32.5
	2) Disagree	42	52.5	52.5	85.0
	3) Agree	9	11.3	11.3	96.3
	4) Strongly agree	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1)Strongly disagree	8	10.0	10.0	10.0
	2) Disagree	43	53.8	53.8	63.7
	3) Agree	24	30.0	30.0	93.8
	4) Strongly Agree	5	6.3	6.3	100.0
	Total	80	100.0	100.0	

11. I can pick up quickly if someone says one thing but means another.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	1	1.3	1.3	1.3
	2) Disagree	7	8.8	8.9	10.1
	3) Agree	52	65.0	65.8	75.9
	4) Strongly Agree	19	23.8	24.1	100.0
	Total	79	98.8	100.0	
Missing	System	1	1.3		
Total		80	100.0		

12. It is hard for me to see why some things upset people so much.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	21	26.3	26.3	26.3
	2) Disagree	37	46.3	46.3	72.5
	3) Agree	15	18.8	18.8	91.3
	4) Strongly Agree	7	8.8	8.8	100.0
	Total	80	100.0	100.0	

13. I find it easy to put myself in somebody else's shoes.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	2	2.5	2.5	2.5
	2)Disagree	13	16.3	16.3	18.8
	3) Agree	43	53.8	53.8	72.5
	4) Strongly agree	22	27.5	27.5	100.0
	Total	80	100.0	100.0	

14. I am good at predicting how someone will feel.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	8	10.0	10.3	10.3
	3) Agree	51	63.7	65.4	75.6
	4) Strongly agree	19	23.8	24.4	100.0
	Total	78	97.5	100.0	
Missing	System	2	2.5		
Total		80	100.0		

15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	5	6.3	6.3	6.3
	3) Agree	49	61.3	62.0	68.4
	4) Strongly agree	25	31.3	31.6	100.0
	Total	79	98.8	100.0	
Missing	System	1	1.3		
Total		80	100.0		

18. I can't always see why someone should have felt offended by a remark.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	8	10.0	10.0	10.0
	2)Disagree	39	48.8	48.8	58.8
	3) Agree	29	36.3	36.3	95.0
	4) Strongly agree	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

21. I don't tend to find social situations confusing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	3	3.8	3.8	3.8
	2)Disagree	22	27.5	27.5	31.3
	3) Agree	36	45.0	45.0	76.3
	4) Strongly agree	19	23.8	23.8	100.0
	Total	80	100.0	100.0	

22. Other people tell me I am good at understanding how they are feeling and what they are thinking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	1	1.3	1.3	1.3
	2)Disagree	8	10.0	10.0	11.3
	3) Agree	45	56.3	56.3	67.5
	4) Strongly agree	26	32.5	32.5	100.0
	Total	80	100.0	100.0	

26. I can easily tell if someone else is interested or bored with what I am saying.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	6	7.5	7.5	7.5
	3) Agree	47	58.8	58.8	66.3
	4) Strongly agree	27	33.8	33.8	100.0
	Total	80	100.0	100.0	

28. Friends usually talk to me about their problems as they say that I am very understanding.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	5	6.3	6.3	6.3
	3) Agree	40	50.0	50.0	56.3
	4) Strongly agree	35	43.8	43.8	100.0
	Total	80	100.0	100.0	

29. I can sense if I am intruding, even if the other person doesn't tell me.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	5	6.3	6.3	6.3
	3) Agree	50	62.5	62.5	68.8
	4) Strongly agree	25	31.3	31.3	100.0
	Total	80	100.0	100.0	

31. Other people often say that I am insensitive, though I don't always see why.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	29	36.3	36.3	36.3
	2)Disagree	37	46.3	46.3	82.5
	3) Agree	10	12.5	12.5	95.0
	4) Strongly agree	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

34. I can tune into how someone else feels rapidly and intuitively.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	1	1.3	1.3	1.3
	2)Disagree	12	15.0	15.0	16.3
	3) Agree	48	60.0	60.0	76.3
	4) Strongly agree	19	23.8	23.8	100.0
	Total	80	100.0	100.0	

35. I can easily work out what another person might want to talk about.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2)Disagree	22	27.5	27.8	27.8
	3) Agree	50	62.5	63.3	91.1
	4) Strongly agree	7	8.8	8.9	100.0
	Total	79	98.8	100.0	
Missing	System	1	1.3		
Total		80	100.0		

36. I can tell if someone is masking their true emotion.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2) Disagree	12	15.0	15.0	15.0
	3) Agree	49	61.3	61.3	76.3
	4) Strongly agree	19	23.8	23.8	100.0
	Total	80	100.0	100.0	

38. I am good at predicting what someone will do.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	1	1.3	1.3	1.3
	2) Disagree	20	25.0	25.0	26.3
	3) Agree	50	62.5	62.5	88.8
	4) Strongly agree	9	11.3	11.3	100.0
	Total	80	100.0	100.0	

39. I tend to get emotionally involved with a friend's problems.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	6	7.5	7.5	7.5
	2) Disagree	19	23.8	23.8	31.3
	3) Agree	37	46.3	46.3	77.5
	4) Strongly agree	18	22.5	22.5	100.0
	Total	80	100.0	100.0	

Reversed score empathy frequencies

Frequencies

Notes

Output Created		02-AUG-2017 14:05:27
Comments		
Input	Data	C:\Users\trace\Desktop\ANALYSIS DATA\DATA FILE WITH REVERSE SCORING\reversed scores data file .sav
	Active Dataset	DataSet1
	File Label	File created by user 'bos2' at Wed Jul 26 10:59:18 2017
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q1_a_i Q1_a_ii Q1_a_iii Q1_a_v Q1_a_ix Q1_a_xv /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

Statistics

		4. I find it hard to know what to do in a social situation.	8. I often find it difficult to judge if something is rude or polite.	9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	12. It is hard for me to see why some things upset people so much.	18. I can't always see why someone should have felt offended by a remark.	
N	Valid	80	80	80	80	80	
	Missing	0	0	0	0	0	

Statistics

		31. Other people often say that I am insensitive, though I don't always see why.
N	Valid	80
	Missing	0

Frequency Table

4. I find it hard to know what to do in a social situation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	4	5.0	5.0	5.0
	2) Disagree	18	22.5	22.5	27.5
	3) Agree	38	47.5	47.5	75.0
	4) Strongly agree	20	25.0	25.0	100.0
	Total	80	100.0	100.0	

8. I often find it difficult to judge if something is rude or polite.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	3	3.8	3.8	3.8
	2) Disagree	9	11.3	11.3	15.0
	3) Agree	42	52.5	52.5	67.5
	4) Strongly agree	26	32.5	32.5	100.0
	Total	80	100.0	100.0	

9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1)Strongly disagree	5	6.3	6.3	6.3
	2) Disagree	24	30.0	30.0	36.3
	3) Agree	43	53.8	53.8	90.0
	4) Strongly Agree	8	10.0	10.0	100.0
	Total	80	100.0	100.0	

12. It is hard for me to see why some things upset people so much.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	7	8.8	8.8	8.8
	2) Disagree	15	18.8	18.8	27.5
	3) Agree	37	46.3	46.3	73.8
	4) Strongly Agree	21	26.3	26.3	100.0
	Total	80	100.0	100.0	

18. I can't always see why someone should have felt offended by a remark.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	4	5.0	5.0	5.0
	2)Disagree	29	36.3	36.3	41.3
	3) Agree	39	48.8	48.8	90.0
	4) Strongly agree	8	10.0	10.0	100.0
	Total	80	100.0	100.0	

31. Other people often say that I am insensitive, though I don't always see why.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly Disagree	4	5.0	5.0	5.0
	2)Disagree	10	12.5	12.5	17.5
	3) Agree	37	46.3	46.3	63.7
	4) Strongly agree	29	36.3	36.3	100.0
	Total	80	100.0	100.0	

Vignette statement frequencies

Frequencies

Notes

Output Created		02-AUG-2017 13:56:15
Comments		
Input	Data	C:\Users\trace\Desktop\ANALYSIS DATA\ORIGINAL DATA FILE BEFORE REVERSE SCORING\final merged data (6).sav
	Active Dataset	DataSet1
	File Label	File created by user 'bos2' at Wed Jul 26 10:59:18 2017
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Statistics

		I feel afraid	This man might be dangerous.	I think this man could have controlled his feelings and chosen to remain calm.	This man shows lack of faith in God.	The librarians should keep people with these problems out of the library.						
N	Valid	80	79	80	80	80						
	Missing	0	1	0	0	0						

Statistics

		This man might be influenced by demonic forces.	No one in my family could ever have this sort of problem.	I could never have this sort of problem.	I feel compassion for this man.	I want to learn more about this type of problem this man has.	
N	Valid	80	80	80	80	80	
	Missing	0	0	0	0	0	

Statistics

		This man has done nothing to cause his problems
N	Valid	80
	Missing	0

Frequency Table

I feel afraid

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	21	26.3	26.3	26.3
	2) Disagree	28	35.0	35.0	61.3
	3) Neutral	21	26.3	26.3	87.5
	4) Agree	8	10.0	10.0	97.5
	5) Strongly agree	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

This man might be dangerous.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	7	8.8	8.9	8.9
	2) Disagree	23	28.7	29.1	38.0
	3) Neutral	22	27.5	27.8	65.8
	4) Agree	25	31.3	31.6	97.5
	5) Strongly agree	2	2.5	2.5	100.0
	Total	79	98.8	100.0	
Missing	System	1	1.3		
Total		80	100.0		

I think this man could have controlled his feelings and chosen to remain calm.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	23	28.7	28.7	28.7
	2) Disagree	33	41.3	41.3	70.0
	3) Neutral	16	20.0	20.0	90.0
	4) Agree	7	8.8	8.8	98.8
	5) Strongly agree	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

This man shows lack of faith in God.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	42	52.5	52.5	52.5
	2) Disagree	16	20.0	20.0	72.5
	3) Neutral	15	18.8	18.8	91.3
	4) Agree	5	6.3	6.3	97.5
	5) Strongly agree	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

The librarians should keep people with these problems out of the library.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	48	60.0	60.0	60.0
	2) Disagree	25	31.3	31.3	91.3
	3) Neutral	3	3.8	3.8	95.0
	4) Agree	3	3.8	3.8	98.8
	5) Strongly agree	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

This man might be influenced by demonic forces.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	50	62.5	62.5	62.5
	2) Disagree	19	23.8	23.8	86.3
	3) Neutral	6	7.5	7.5	93.8
	4) Agree	4	5.0	5.0	98.8
	5) Strongly agree	1	1.3	1.3	100.0
	Total	80	100.0	100.0	

No one in my family could ever have this sort of problem.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	44	55.0	55.0	55.0
	2) Disagree	19	23.8	23.8	78.8
	3) Neutral	11	13.8	13.8	92.5
	4) Agree	6	7.5	7.5	100.0
	Total	80	100.0	100.0	

I could never have this sort of problem.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	37	46.3	46.3	46.3
	2) Disagree	27	33.8	33.8	80.0
	3) Neutral	6	7.5	7.5	87.5
	4) Agree	7	8.8	8.8	96.3
	5) Strongly agree	3	3.8	3.8	100.0
	Total	80	100.0	100.0	

I feel compassion for this man.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	2	2.5	2.5	2.5
	2) Disagree	4	5.0	5.0	7.5
	3) Neutral	8	10.0	10.0	17.5
	4) Agree	33	41.3	41.3	58.8
	5) Strongly agree	33	41.3	41.3	100.0
	Total	80	100.0	100.0	

I want to learn more about this type of problem this man has.

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1) Strongly disagree	4	5.0	5.0	5.0
	2) Disagree	7	8.8	8.8	13.8
	3) Neutral	13	16.3	16.3	30.0
	4) Agree	40	50.0	50.0	80.0
	5) Strongly agree	16	20.0	20.0	100.0
	Total	80	100.0	100.0	

This man has done nothing to cause his problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	2	2.5	2.5	2.5
	2) Disagree	8	10.0	10.0	12.5
	3) Neutral	33	41.3	41.3	53.8
	4) Agree	21	26.3	26.3	80.0
	5) Strongly agree	16	20.0	20.0	100.0
	Total	80	100.0	100.0	

Reversed vignette statement frequencies

Frequencies

Notes

Output Created		02-AUG-2017 14:09:52
Comments		
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	Filter	<none>
	Weight	<none>
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	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q11 Q12 Q13 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

Statistics

		I feel compassion for this man.	I want to learn more about this type of problem this man has.	This man has done nothing to cause his problems
N	Valid	80	80	80
	Missing	0	0	0

Frequency table

I feel compassion for this man.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	33	41.3	41.3	41.3
	2) Disagree	33	41.3	41.3	82.5
	3) Neutral	8	10.0	10.0	92.5
	4) Agree	4	5.0	5.0	97.5
	5) Strongly agree	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

I want to learn more about this type of problem this man has.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	16	20.0	20.0	20.0
	2) Disagree	40	50.0	50.0	70.0
	3) Neutral	13	16.3	16.3	86.3
	4) Agree	7	8.8	8.8	95.0
	5) Strongly agree	4	5.0	5.0	100.0
	Total	80	100.0	100.0	

This man has done nothing to cause his problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1) Strongly disagree	16	20.0	20.0	20.0
	2) Disagree	21	26.3	26.3	46.3
	3) Neutral	33	41.3	41.3	87.5
	4) Agree	8	10.0	10.0	97.5
	5) Strongly agree	2	2.5	2.5	100.0
	Total	80	100.0	100.0	

Appendix L: Cronbach's Alpha SPSS results

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	78	97.5
	Excluded[a]	2	2.5
	Total	80	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.844	22

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I can easily tell if someone else wants to enter a conversation.	63.83	50.894	.450	.837
3. I really enjoy caring for other people	63.72	50.958	.380	.839
4. I find it hard to know what to do in a social situation.	64.12	51.922	.227	.847

8. I often find it difficult to judge if something is rude or polite.	63.90	51.262	.317	.842
9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.	64.33	51.524	.311	.842
11. I can pick up quickly if someone says one thing but means another.	63.88	52.207	.317	.842
12. It is hard for me to see why some things upset people so much.	64.14	48.175	.507	.834
13. I find it easy to put myself in somebody else's shoes.	63.97	49.636	.493	.835
14. I am good at predicting how someone will feel.	63.88	50.675	.524	.835
15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.	63.78	50.432	.569	.833
18. I can't always see why someone should have felt offended by a remark.	64.40	51.905	.267	.844
21. I don't tend to find social situations confusing.	64.15	48.911	.505	.834
22. Other people tell me I am good at understanding how they are feeling and what they are thinking.	63.83	50.582	.451	.837

26. I can easily tell if someone else is interested or bored with what I am saying.	63.77	51.115	.454	.837
28. Friends usually talk to me about their problems as they say that I am very understanding.	63.64	49.999	.573	.833
29. I can sense if I am intruding, even if the other person doesn't tell me.	63.78	50.484	.563	.834
31. Other people often say that I am insensitive, though I don't always see why.	63.88	51.168	.288	.844
34. I can tune into how someone else feels rapidly and intuitively.	63.96	49.570	.558	.832
35. I can easily work out what another person might want to talk about.	64.21	51.048	.477	.836
36. I can tell if someone is masking their true emotion.	63.95	50.465	.506	.835
38. I am good at predicting what someone will do.	64.19	51.040	.427	.838
39. I tend to get emotionally involved with a friend's problems.	64.21	52.711	.147	.851

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	79	98.8
	Excluded[a]	1	1.3
	Total	80	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.734	11

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I feel afraid	20.32	30.604	.146	.748
This man might be dangerous.	19.70	30.009	.205	.739
I think this man could have controlled his feelings and chosen to remain calm.	20.47	29.380	.288	.727
This man shows lack of faith in God.	20.73	28.377	.328	.723

The librarians should keep people with these problems out of the library.	21.05	28.510	.463	.706
This man might be influenced by demonic forces.	21.03	28.025	.468	.704
No one in my family could ever have this sort of problem.	20.85	26.566	.592	.686
I could never have this sort of problem.	20.68	25.963	.547	.689
I feel compassion for this man.	20.72	27.332	.508	.697
I want to learn more about this type of problem this man has.	20.30	27.932	.392	.713
This man has done nothing to cause his problems	20.10	28.990	.311	.725

Appendix M: 2x2 ANOVA SPSS outputs

Stigma total by vignette and status

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	43
	2	Homelessness	36
Status	1	Student	42
	2	non student	37

Tests of Between-Subjects Effects

Dependent Variable: stigmatotal

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	338.512[a]	3	112.837	3.734	.015
Intercept	40282.889	1	40282.889	1332.973	.000
Vignette	9.660	1	9.660	.320	.574
Status	184.649	1	184.649	6.110	.016
Vignette * status	124.032	1	124.032	4.104	.046
Error	2266.526	75	30.220		
Total	42937.000	79			
Corrected Total	2605.038	78			

a. R Squared = .130 (Adjusted R Squared = .095)

Empathy total by vignette and status

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	43
	2	Homelessness	35
Status	1	Student	40
	2	non student	38

Tests of Between-Subjects Effects

Dependent Variable: empathytotal

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	112.607[a]	3	37.536	.670	.573
Intercept	346702.505	1	346702.505	6189.112	.000
Vignette	88.270	1	88.270	1.576	.213
Status	25.297	1	25.297	.452	.504
Vignette * status	2.174	1	2.174	.039	.844
Error	4145.342	74	56.018		
Total	354668.000	78			
Corrected Total	4257.949	77			

a. R Squared = .026 (Adjusted R Squared = -.013)

Estimated Marginal Means

1. Vignette * status

Dependent Variable: empathytotal

Vignette	Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Schizophrenia	Student	66.783	1.561	63.673	69.892
	non student	65.300	1.674	61.965	68.635
Homelessness	Student	68.588	1.815	64.971	72.205
	non student	67.778	1.764	64.263	71.293

2. Vignette

Dependent Variable: empathytotal

Vignette	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Schizophrenia	66.041	1.144	63.762	68.321
Homelessness	68.183	1.266	65.661	70.705

SPSS Anova results for Vignette by status and the different adult attachment styles

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	44
	2	Homelessness	35
Status	1	Student	41
	2	non student	38

Tests of Between-Subjects Effects

Dependent Variable: ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	11.038[a]	3	3.679	.922	.435
Intercept	1873.591	1	1873.591	469.427	.000
Vignette	2.993	1	2.993	.750	.389
Status	2.993	1	2.993	.750	.389
Vignette * status	4.674	1	4.674	1.171	.283
Error	299.342	75	3.991		
Total	2216.000	79			
Corrected Total	310.380	78			

a. R Squared = .036 (Adjusted R Squared = -.003)

Estimated Marginal Means

1. Vignette * status

Dependent Variable: ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Vignette	Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Schizophrenia	Student	4.667	.408	3.854	5.479

	non student	5.550	.447	4.660	6.440
Homelessness	Student	4.765	.485	3.799	5.730
	non student	4.667	.471	3.729	5.605

2. Vignette

Dependent Variable: ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Vignette	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Schizophrenia	5.108	.302	4.506	5.711
Homelessness	4.716	.338	4.043	5.389

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	42
	2	Homelessness	36
status	1	Student	42
	2	non student	36

Tests of Between-Subjects Effects

Dependent Variable: ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.166[a]	3	.389	.089	.966
Intercept	1261.008	1	1261.008	288.441	.000
Vignette	.208	1	.208	.048	.828
Status	.001	1	.001	.000	.988
Vignette * status	.890	1	.890	.204	.653
Error	323.514	74	4.372		
Total	1613.000	78			
Corrected Total	324.679	77			

a. R Squared = .004 (Adjusted R Squared = -.037)

Estimated Marginal Means

1. Vignette * status

Dependent Variable: ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

Vignette	Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound

Schizophrenia	Student	4.208	.427	3.358	5.059
	non student	4.000	.493	3.018	4.982
Homelessness	Student	3.889	.493	2.907	4.871
	non student	4.111	.493	3.129	5.093

2. Vignette

Dependent Variable: ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

			95% Confidence Interval	
Vignette	Mean	Std. Error	Lower Bound	Upper Bound
Schizophrenia	4.104	.326	3.455	4.754
Homelessness	4.000	.348	3.306	4.694

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	42
	2	Homelessness	36
Status	1	Student	42
	2	non student	36

Tests of Between-Subjects Effects

Dependent Variable: ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11.892[a]	3	3.964	1.243	.300
Intercept	718.668	1	718.668	225.438	.000
Vignette	.579	1	.579	.182	.671
Status	2.223	1	2.223	.697	.406
Vignette * status	9.823	1	9.823	3.081	.083
Error	235.903	74	3.188		
Total	974.000	78			
Corrected Total	247.795	77			

a. R Squared = .048 (Adjusted R Squared = .009)

Estimated Marginal Means

1. Vignette * status

Dependent Variable: ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a

Vignette	Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Schizophrenia	Student	2.958	.364	2.232	3.685
	non student	3.333	.421	2.495	4.172
Homelessness	Student	3.500	.421	2.661	4.339
	non student	2.444	.421	1.606	3.283

2. Vignette

Dependent Variable: ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a

Vignette	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Schizophrenia	3.146	.278	2.591	3.700
Homelessness	2.972	.298	2.379	3.565

Between-Subjects Factors

		Value Label	N
Vignette	1	Schizophrenia	42
	2	Homelessness	36
status	1	Student	42
	2	non student	36

Tests of Between-Subjects Effects

Dependent Variable: ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.316[a]	3	1.105	.280	.840
Intercept	1178.133	1	1178.133	298.341	.000
Vignette	.059	1	.059	.015	.903
status	2.904	1	2.904	.735	.394
Vignette * status	.533	1	.533	.135	.714
Error	292.222	74	3.949		
Total	1496.000	78			
Corrected Total	295.538	77			

a. R Squared = .011 (Adjusted R Squared = -.029)

Estimated Marginal Means

1. Vignette * status

Dependent Variable: ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Vignette	Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Schizophrenia	Student	4.000	.406	3.192	4.808
	non student	3.778	.468	2.844	4.711
Homelessness	Student	4.222	.468	3.289	5.156
	non student	3.667	.468	2.733	4.600

2. Vignette

Dependent Variable: ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Vignette	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Schizophrenia	3.889	.310	3.272	4.506
Homelessness	3.944	.331	3.285	4.604

Appendix N: SPSS correlation analyses

Correlations

Notes

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Comments		
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	Weight	<none>
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	N of Rows in Working Data File	80
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	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=empathytotal stigmatotal Q2_a Q2_b Q2_c Q2_d /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.02

Elapsed Time	00:00:00.02

Correlations

		empathytotal	stigmatotal	____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.
Empathytotal	Pearson Correlation	1	-.431**	.280*	-.052	-.150	-.022
	Sig. (2-tailed)		.000	.014	.656	.195	.850

	N	78	77	77	76	76	76
Stigmatotal	Pearson Correlation	-.431**	1	-.023	.018	.196	-.134
	Sig. (2-tailed)	.000		.839	.872	.085	.243
	N	77	79	78	78	78	78
____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	Pearson Correlation	.280*	-.023	1	-.404**	-.145	-.174
	Sig. (2-tailed)	.014	.839		.000	.208	.130
	N	77	78	79	77	77	77
____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	Pearson Correlation	-.052	.018	-.404**	1	.362**	.066
	Sig. (2-tailed)	.656	.872	.000		.001	.567
	N	76	78	77	78	78	78
____ C. I want to be completely emotionally intimate with	Pearson Correlation	-.150	.196	-.145	.362**	1	-.217
	Sig. (2-tailed)	.195	.085	.208	.001		.056

others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	N	76	78	77	78	78	78
____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	Pearson Correlation	-.022	-.134	-.174	.066	-.217	1
	Sig. (2-tailed)	.850	.243	.130	.567	.056	
	N	76	78	77	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations for the homeless vignette only

Correlations

Notes

Output Created		03-AUG-2017 10:16:48
Comments		
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=Q2_a Q2_b Q2_c Q2_d empathytotal stigmatotal /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.

Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Correlations

		____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	empathytotal	Stigmatotal
____ A. It is easy for me to become	Pearson Correlation	1	-.377*	-.005	-.329	.416*	.173

emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	Sig. (2-tailed)		.025	.979	.054	.015	.320
	N	35	35	35	35	34	35
____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	Pearson Correlation	-.377*	1	.381*	-.038	-.130	.079
	Sig. (2-tailed)	.025		.022	.825	.456	.645
	N	35	36	36	36	35	36
____ C. I want to be completely emotionally intimate with	Pearson Correlation	-.005	.381*	1	-.088	-.133	.303
	Sig. (2-tailed)	.979	.022		.611	.446	.073

others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	N	35	36	36	36	35	36
____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	Pearson Correlation	-.329	-.038	-.088	1	-.067	-.198
	Sig. (2-tailed)	.054	.825	.611		.704	.247
	N	35	36	36	36	35	36
Empathytotal	Pearson Correlation	.416*	-.130	-.133	-.067	1	-.490**
	Sig. (2-tailed)	.015	.456	.446	.704		.003
	N	34	35	35	35	35	35
Stigmatotal	Pearson Correlation	.173	.079	.303	-.198	-.490**	1
	Sig. (2-tailed)	.320	.645	.073	.247	.003	
	N	35	36	36	36	35	36

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations for the schizophrenia vignette only

Correlations

Notes

Output Created		03-AUG-2017 09:44:40
Comments		
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	Filter	Vignette = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	44
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=Q2_a Q2_b Q2_c Q2_d empathytotal stigmatotal /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.00

Elapsed Time	00:00:00.12

Correlations

		____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	empathytotal	Stigmatotal
____ A. It is easy for me to become	Pearson Correlation	1	-.436**	-.274	-.033	.196	-.177

emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	Sig. (2-tailed)		.004	.079	.836	.209	.258
	N	44	42	42	42	43	43
____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	Pearson Correlation	-.436**	1	.348*	.143	.019	-.021
	Sig. (2-tailed)	.004		.024	.367	.906	.894
	N	42	42	42	42	41	42
____ C. I want to be completely emotionally intimate with	Pearson Correlation	-.274	.348*	1	-.312*	-.150	.128
	Sig. (2-tailed)	.079	.024		.045	.349	.419

others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	N	42	42	42	42	41	42
____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	Pearson Correlation	-.033	.143	-.312*	1	.005	-.091
	Sig. (2-tailed)	.836	.367	.045		.975	.565
	N	42	42	42	42	41	42
Empathytotal	Pearson Correlation	.196	.019	-.150	.005	1	-.392*
	Sig. (2-tailed)	.209	.906	.349	.975		.010
	N	43	41	41	41	43	42
Stigmatotal	Pearson Correlation	-.177	-.021	.128	-.091	-.392*	1
	Sig. (2-tailed)	.258	.894	.419	.565	.010	
	N	43	42	42	42	42	43

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Notes

Output Created		03-AUG-2017 10:14:13
Comments		
Input	Data	C:\Users\trace\Desktop\ANALYSIS DATA\DATA FILE WITH REVERSE SCORING\reversed scores data file .sav
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	File Label	File created by user 'bos2' at Wed Jul 26 10:59:18 2017
	Filter	Vignette = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	44
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q13 /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

Appendix O: SPSS output hierarchical regression analysis

Regression

Notes

Output Created		03-AUG-2017 12:21:34
Comments		
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	80
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT stigmatotal /METHOD=ENTER Q2_a Q2_b Q2_c Q2_d empathytotal /METHOD=ENTER empathyA empathyB empathyC empathyD.
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.07
	Memory Required	9712 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method

1	empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that	.	Enter

	others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.[b]		
2	empathyD, empathyA, empathyC, empathyB[b]	.	Enter

a. Dependent Variable: stigmatotal

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change			
1	.446[a]	.199	.141	5.31195	.199	3.425			
2	.487[b]	.237	.131	5.34105	.038	.813			

Model Summary

Model	Change Statistics		
	df1	df2	Sig. F Change
1	5	69	.008
2	4	65	.522

a. Predictors: (Constant), empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

b. Predictors: (Constant), empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me., empathyD, empathyA, empathyC, empathyB

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	483.228	5	96.646	3.425	.008[b]
	Residual	1946.958	69	28.217		
	Total	2430.187	74			
2	Regression	575.941	9	63.993	2.243	.030[c]
	Residual	1854.246	65	28.527		
	Total	2430.187	74			

a. Dependent Variable: stigmatotal

b. Predictors: (Constant), empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

c. Predictors: (Constant), empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me., empathyD, empathyA, empathyC, empathyB

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	43.210	6.214		6.953	.000
	____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	.208	.356	.073	.586	.560
	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	-.015	.346	-.005	-.043	.966
	____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	.325	.383	.102	.848	.400

	____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	-.215	.331	-.073	-.650	.518
	Empathytotal	-.326	.086	-.428	-3.772	.000
2	(Constant)	70.762	27.430		2.580	.012
	____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.	-3.483	2.917	-1.216	-1.194	.237
	____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.	1.529	4.026	.559	.380	.705

____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a	-.749	4.496	-.235	-.167	.868
____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	-3.625	3.348	-1.228	-1.083	.283
Empathytotal	-.758	.406	-.995	-1.866	.067
empathyA	.057	.043	1.485	1.314	.193
empathyB	-.023	.059	-.595	-.399	.691
empathyC	.017	.066	.352	.251	.803
empathyD	.053	.050	1.226	1.061	.292

a. Dependent Variable: stigmatotal

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	empathyA	1.481[b]	1.458	.150	.174	.011
	empathyB	-.767[b]	-.667	.507	-.081	.009
	empathyC	-.317[b]	-.276	.783	-.033	.009
	empathyD	.781[b]	.766	.446	.093	.011

a. Dependent Variable: stigmatotal

b. Predictors in the Model: (Constant), empathytotal, ____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me., ____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others., ____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much a, ____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

Appendix P: Webb et al (2016) journal

Volume 38/Number 1/January 2016/Pages 62–78/doi:10.17744/mehc.38.1.05

The Role of Empathy and Adult Attachment in Predicting Stigma toward Severe and Persistent Mental Illness and other Psychosocial or Health Conditions

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Research suggests that empathy may reduce stigma, while adult attachment style may influence empathy. We examined stigma toward schizophrenia and other psychosocial or health concerns. We created vignettes describing a person displaying behavioral problems with different reasons offered for the behavior. Vignettes were followed by stigma items. Participants (N = 347) also completed empathy and adult attachment scales. The most stigma was found with a homelessness vignette, and the least with an Alzheimer's disease vignette. No significant differences in stigma were found between bipolar disorder, schizophrenia, or "severe psychological disorder" vignettes. Hierarchical regression analysis indicated a significant main effect for empathy. Interaction terms for empathy and adult attachment did not explain a significant proportion of stigma variance. Results are discussed in terms of mainstream conceptions of these conditions.

Stigma is a social process by which individuals or groups are deemed undesirable due to physical, social, or psychological qualities, and are subsequently excluded or avoided by a majority group (Stier & Hinshaw, 2007). While there remains some lack of consensus regarding theories of stigma (Link & Phelan, 2001), Goffman's (1963) early descriptions of stigma have spawned a great deal of research over the successive decades. Goffman suggested that the term was originally utilized in ancient Greece to describe a mark, which indicated a characterological or ethical deficiency. This deficiency was assumed based on the presence of some other medical illness or impairment, which was viewed as potentially contagious. In order to assist the community in the

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Jessica Peterson is now at Fulton State Hospital in Fulton, MO. Laurel Stinar is now at Innovative Psychological Solutions in Las Vegas, NV.

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avoidance of these persons, their bodies were literally branded or wounded with marks of stigma. Thus, a significant factor in the construct of stigma, even to the current day, is the perception of the need to avoid persons who in some way are considered tainted.

Unfortunately, stigma surrounding psychiatric diagnoses is widespread and a significant problem that is expressed in a variety of ways. Public stigma may lead to decreased housing or job opportunities and diminished social support as some individuals fear people who have mental illnesses (Corrigan & Shapiro, 2010). Stigmatizing views held by the public may also be internalized by individuals with mental illness. This internalized stigma, or *self-stigma*, manifests as decreased self-efficacy when individuals adopt stigmatizing attitudes and apply these attitudes to themselves (Corrigan & Watson, 2002). In these ways, stigma may exacerbate the course of mental illness for some individuals, which may in turn contribute to the public perception of an individual with a mental illness as being a "mental patient" with the negative connotations that phrase carries (Ben-Zeev, Young, & Corrigan, 2010; Corrigan & Larson, 2008).

Stigma also involves the labeling of individuals who are perceived as an out-group. Link and Phelan (2006) have noted that stigma involves a categorical separation of "us" from "them." These researchers further suggested that identifying a person's differences and then labeling those differences is a prerequisite for stigma to occur (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Link & Phelan, 2006). Thus, a catalyst for stigma may be the diagnostic label used for a mental health disorder. This label designates the placement of persons within a specific category, and the potential presence of behaviors or experiences that would be deemed inappropriate or unusual in individuals who are considered mentally healthy (Kroska & Harkness, 2008; Link et al., 1989; Link & Phelan, 2010; Socall & Holtgraves, 1992).

The notion that mental illness stigma may be associated with the labels applied to these disorders is evident in decisions over the previous decades to alter some diagnostic terms. For example, the term "chronic," often used in conjunction with the description of some mental illnesses, was abandoned in part due to the perception that "chronic" implied poor prognoses for essentially untreatable disorders (Parabiaghi, Bonetto, Ruggeri, Lasalvia, & Leese, 2006). Instead, in recent years, the phrase "severe and persistent" is more often used to describe this same population. In addition, what was once often labeled "manic depressive disorder" was ultimately renamed "bipolar disorder" in the third edition of the Diagnostic and Statistical Manual of Mental Disorders. Reasons for this change included increased concern about the stigma and distortion associated with the term "mania" (as demonstrated, for example, in the phrase "homicidal maniac;" Martin, 2007). Similar concerns have been expressed in the research literature about the term "schizophrenia" (Kim & Berrios, 2001; Levin, 2006; Ono et al., 1999). The Swiss psychiatrist Bleuler first coined this diagnostic label, combining two Greek words which meant *split* (schizein) and *brain* or *mind* (phren) (Fusar-Poli & Politi, 2008). While this term remains in use in the English speaking world, in 2002, the Japanese Society for Psychology and Neurology decided to officially change the Japanese

equivalent of schizophrenia. They replaced the label, "Seishin Bunretsu Byo," which means "mind-split-disease," with the new term "Togo Shitcho Sho," which means "integration disorder." Reasons cited for this change included the perception that the term, "Seishin Bunretsu Byo," as it was originally conceived and currently understood, was both misleading and stigmatizing (Kim & Berrios; Sato, 2006).

One goal of the present study was to examine stigma toward forms of severe and persistent mental illness (SPMI). According to the National Institute of Mental Health, severe and persistent mental illness involves three components: (a) a non-organic psychosis or personality disorder, (b) extended treatment (two or more years), and (c) significant impairment in social, occupational, or educational functioning (Ruggeri, Leese, Thornicroft, Bisoffi, & Tansella, 2000).

Previous studies have employed vignettes to elicit stigmatized attitudes toward mental illness. Vignettes are considered one means by which to prompt participant attitudes, while evading the impact of social desirability (Pescosolido et al., 2010). Vignette studies have examined stigma as a response to both childhood psychopathology and disorders typically diagnosed in adulthood. Differences in the degree of stigma toward hypothesized characters in short narratives have in fact been demonstrated, with greater stigma toward children with ADHD and depression than toward children with asthma or "daily troubles" (Pescosolido, Fettes, Martin, Monahan, & McLeod, 2007, p. 619). Another vignette study examining stigma toward adult disorders involved approximately 19,500 participants from 16 countries. In response to narratives describing individuals with symptoms of schizophrenia or depression, greater stigma was found for characters exhibiting symptoms of schizophrenia. Participants also demonstrated less knowledge about schizophrenia than about depression. However, both characters were viewed as potentially unpredictable and dangerous to themselves (Pescosolido et al., 2013). A third vignette study compared approximately 1,950 participant reactions across a span of a decade (from 1996 to 2006). In this research, Pescosolido et al. (2010) found that over the 10 year period, participants exhibited increased awareness of the physiological bases of mental illness, and increased endorsement of medical interventions; however, stigmatized responses to mental illness remained high.

For the present study, we hoped to focus in particular on the role of the labels currently used to describe these disorders as markers of that which distinguishes mentally ill persons from the general population. Thus, unlike other studies, we did not vary the descriptions of the characters' behaviors in our vignettes; we varied only the label assigned to those behaviors. We hoped to discern whether labels for severe and persistent mental illnesses, such as schizophrenia and bipolar disorder, elicited greater degrees of stigmatization in comparison to labels for health and psychosocial problems, such as Alzheimer's disease and homelessness, despite the fact that these conditions may be accompanied by behaviors or an appearance similar to persons with mental illness. Schizophrenia and bipolar disorder were chosen for further examination in this study, given the extensive literature which indicates there is a relationship

among these mental illnesses and stigma (e.g., Hawke, Pariskh, & Michalak 2013; Vahabzadeh, Wittenauer, & Carr, 2011). Additionally, we wished, on an exploratory basis, to examine the relative degree of stigma potentially associated with the broader, and more generic, label "severe psychological disorder" in comparison to the diagnostic labels schizophrenia and bipolar disorder.

EMPATHY

We were also curious about the potential interpersonal variables which might impact stigma. A review of the research suggests that empathy may be one potential predictor of stigma. While definitions of empathy may vary, and the construct has proven difficult to operationalize (Aragona, Kotzalidis, & Puzella, 2013; Dziobek, 2012; Welker, 2005), in the present study, we defined empathy as a cognitive-affective construct that helps individuals relate to another's thoughts, feelings, and experiences. Based on Baron-Cohen's (2002) theory regarding an empathizing-systemizing differentiation in cognition, Wakabayashi et al. (2007) identified empathizing as "the drive to identify another person's emotions and thoughts, and respond to these with an appropriate emotion.... It provides a way of making sense and predicting another person's behavior" (p. 1824). We wondered, in particular, if the ability to empathize, and thus make sense of another's behavior, decreases the perception of another person as a member of an out-group – as one of "them," rather than one of "us."

Multiple studies have used simulation methodologies in an attempt to increase empathy for persons with mental illness and thus reduce stigma. In this research, participants complete training exercises designed to simulate the symptoms of psychosis (for example, auditory hallucinations). These techniques include the use of audiotaped recordings or virtual reality technology. In a systematic review of 10 of these research studies meeting a minimum quality standard, empathy for individuals with mental illness, particularly for those with schizophrenia, increased following the simulation exercise. However, participants also demonstrated a greater tendency to increase social distance from those who have schizophrenia (Ando, Clement, Barley & Thornicroft, 2011). Social distancing is considered a form of stigma toward mental illness (Angermeyer, Matschinger, & Corrigan, 2004; Link, Phelan, Bresnahan, Stueve, & Pescosolido 1999; Norman et al., 2010).

Perhaps simulation exercises, while potentially offering an insider's perspective on psychotic symptoms, do not necessarily provide participants with the opportunity to bridge the conceptual gap between "us" and "them" which may underlie both empathy and reductions in stigma toward persons with mental illness. For example, it may be that understanding the devastating psychosocial impact of these disorders, rather than appreciating the challenge of psychotic symptoms, may be a more powerful means to increase empathy.

Studies employing methodologies for encouraging empathy other than simulation techniques have produced less conflicting results. For example, qualitative research by Webster (2009) aimed to help nursing students gain a better understanding of mental illness while developing empathy through a

creative, reflective exercise. Each nursing student worked with a person diagnosed with a mental illness and wrote journal entries about personal assumptions regarding mental disorder. The students also completed a creative project depicting their understanding of their clients' experiences of mental illness. At the beginning of the project, students reported feeling apprehension, anxiety, and stigmatized attitudes toward mental illness. By the end of the study, students began to demonstrate more empathy. They described greater awareness of mentally ill persons' sense of powerlessness, dependence, and their multiple losses in relationships.

In a similar, but quantitative, study, adolescent students participated in six educational sessions about mental illness. Teaching strategies included the use of videos, role-playing, discussions, and Internet searches. In comparison to a control group of students, students receiving the teaching intervention showed, at post-test, more empathy and understanding of individuals with mental illness (Naylor, Howie, Walters, Talamelli, & Dawkins, 2009).

In summary, current studies examining empathy and stigma are limited in number, perhaps due in part to challenges in defining the construct of empathy and operationalizing this construct in research (Aragona et al., 2013; Dziobek, 2012; Welker, 2005). Even so, research does suggest that empathy may influence stigmatizing attitudes toward individuals with mental illness; yet the overall relationship between empathy and stigma appears to be complex and not fully understood. As such, a goal of the present study was to contribute to this body of research by testing the relationship between empathy and stigma, hypothesizing that higher empathy is related with lower levels of stigma.

Adult Attachment and Empathy

Another goal of this study was to examine the role of adult attachment in the hypothesized relationship between empathy and stigma. To date, little research has been conducted on the relationship between adult attachment style and empathy. This may also be due in part to lack of consensus about empathy as a construct (Aragona et al., 2013; Dziobek, 2012; Welker, 2005). However, despite this challenge, researchers have noted that these constructs are theoretically related. Britton and Fuendeling (2005) have commented in particular that the development of a secure base, necessary for adult attachment, is "at least partially dependent on the ability to recognize [others'] needs (p. 521)," suggestive of an intuitive association between empathy and the quality of adult attachment.

The available empirical literature reveals preliminary support for a relationship between empathy and adult attachment. For example, one study examined the relationship between adult attachment style, empathy, and helping behavior among United States undergraduates approximately one month after the September 11, 2001 attacks. Empathy was predicted by adult attachment style, with more secure adult attachment associated with greater empathy, and avoidant adult attachment associated with reduced empathy. No

relationship was found between anxious adult attachment and empathy as a result of a curvilinear relationship between these variables (Wayment, 2006).

For this study, we employed Bartholomew and Horowitz's (1991) four-category adult attachment model. This model has been used as a theoretical base for multiple adult attachment studies and includes secure, preoccupied, dismissing, and fearful adult attachment styles. The model posits two dimensions across which these adult attachment styles may be plotted: (a) one's sense of oneself and (b) one's sense of others. According to this model, *secure* adult attachment involves the sense that one is lovable and others are accepting and responsive. *Pre-occupied* adult attachment indicates the sense that one is unlovable, while continuing to believe that others are accepting and responsive. *Dismissing* adult attachment involves the sense that one is unlovable, at the same time that others seem untrustworthy and/or rejecting; dismissing adult attachment thus results in avoidance of relationships to evade rejection. The last category, *fearful* adult attachment, involves one's sense of feeling loveable, but perceiving others negatively, as untrustworthy or rejecting.

Study Purposes

For the present study, the role of adult attachment was hypothesized to moderate the relationship between empathy and stigma, specifically that higher levels of secure adult attachment have a multiplicative effect on the relationship between empathy and stigma. Thus, we intended to examine (a) the rate of stigma associated with mental illness, as compared to health or psychosocial conditions, (b) the relationship between empathy and stigma, and (c) the role of adult attachment on the relationship between empathy and stigma with secure adult attachment demonstrating higher levels of empathy and lower levers of stigma.

Drawing upon the methodology of previous vignette studies, our participants were given vignettes that described the behavior of an individual, and then provided one of five psychosocial or health explanations for that behavior: (a) schizophrenia, (b) bipolar disorder, (c) "a severe psychological disorder," (d) Alzheimer's disease, or (e) homelessness. In order to focus on the impact of the diagnostic label in particular, the content of these vignettes was identical for all five conditions, with the exception of the label attached to the hypothesized character. Thus, we could more readily assume that respondent stigma was not in reaction to behavioral symptomology, or to the gender or ethnicity of the character described. These vignettes were followed by items assessing stigma which were designed specifically for our vignettes, and measures to assess empathy and adult attachment.

This study had three hypotheses. First, we hypothesized that the vignettes that examined severe and persistent illness (i.e., schizophrenia, bipolar disorder, and severe psychological disorder) would elicit more stigma than the vignettes that examined homelessness and Alzheimer's disease. Second, we hypothesized that individuals who self-reported higher levels of empathy would have lower scores for stigma regardless of the vignette provided. Third,

we hypothesized that the relationship between empathy and stigma would be moderated by adult attachment style, such that secure adult attachment style would demonstrate a multiplicative effect on the hypothesized inverse relationship between empathy and stigma.

METHOD

Participants and Sampling Procedures

Participants comprised undergraduates from a private liberal arts university affiliated with the Free Methodist tradition in the Pacific Northwest. Prior to participant recruitment, the research team acquired IRB approval.

Brief oral presentations regarding the study were conducted during various class periods, informing students that the current study examined health, religious, and social issues, including one's approach to relationships. Students were invited to participate in the study by providing their e-mail addresses on a sign-up sheet, and these students were then sent the web link to the survey via their email accounts. During recruitment, students were informed that participation was voluntary and confidential. Additionally, they were told that choosing not to participate in the study would not affect their course grades. Students were offered extra credit in return for study participation. The course instructor also provided an alternative assignment for students who wished to earn the same extra credit but did not choose to participate in the study.

Participants completed a one-time self-report survey. All surveys were completed on-line and could be completed on any computer of the participant's choosing. Participant data were de-identified and assigned a random number to ensure confidentiality. Access to survey data was password protected and available only to the research team.

Measures

Empathy. The Empathy Quotient-Short Form (EQ; Wakabayashi et al., 2006) measures empathy by assessing affective, cognitive, and mixed (i.e., affective and cognitive) factors that relate to empathy. The measure comprises 22 items. Participants rank items on a 4-point Likert scale from 1 (*Strongly Disagree)* to 4 (*Strongly Agree)*. Sample items include, "I really enjoy caring for other people" and "I can easily tell if someone else wants to enter a conversation" (Wakabayashi et al., 2006, p. 938). Six items are reverse scored. In the present study, items' scores were summed to create a total empathy score. During the initial development of the scale, the EQ had a Cronbach's alpha of 0.88 (Wakabayashi et al., 2006). The Cronbach's alpha for the EQ for this study was .81.

Adult Attachment Style. The aim of the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) is to classify individuals into one of four adult attachment styles according to Bartholomew and Horowitz's four-category, two dimensional model. The RQ has been widely used in adult attachment research (Ravitz, Mauder, Hunter, Sthankiya, & Lancee, 2010). It is a forced-choice, self-report classification measure in which participants identify

themselves with one of four paragraphs describing adult attachment styles: secure, dismissive, preoccupied, and fearful. Participants then rank on a 7-point numerical scale how well they respond to each style, from 1 (*Not at All Like Me)* to 7 (*Very Much Like Me*). For example, the securely attached description read as follows: "It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me" (Bartholomew & Horowitz, 1991, p. 225). Scharfe and Bartholomew (1994) investigated the test-retest reliability of this instrument and found that in an 8-month time period 63% of women and 56% of men endorsed the same adult attachment style. In a 6-year longitudinal study, relationship style was "relatively stable" among a group of participants ranging in age from late adolescence to late adulthood (Zhang & Labouvie-Vief, 2004, p. 419). Validation of the measure has been found in studies associating the four adult attachment styles with items from the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988). The dismissive style was associated with "a lack of warmth" (p. 234); the preoccupied style was "warm" (p. 240) and somewhat intrusive; and the fearful style was associated with items indicative of "social insecurity" (p. 240) and "lack of assertiveness" (p. 240) (Bartholomew & Horowitz, 1991).

Stigma. In order to assess for stigma, the research team developed a series of five vignettes describing an agitated man in a library setting. Psychosocial and health explanations for the behavior of the agitated man included one of five options: (a) schizophrenia, (b) bipolar disorder, (c) Alzheimer's disease, (d) "a severe psychological disorder," and (e) homelessness (that he "has lost his home and is living in his car"). We chose to include the conditions of Alzheimer's disease and homelessness because, although they are not considered forms of severe mental illness, persons who have these conditions may have behaviors or an appearance similar to persons with severe mental illness. All other details about the vignettes were intentionally constructed to be the same; only the explanations for his behavior differed.

Participants in the study were randomized to read one of the five vignettes and then asked to respond to a series of items designed to assess for stigma. Originally, 15 items were constructed, based upon the current literature on stigma; these items referred specifically to the content of the vignettes. For example, empirical literature suggests that stigma is associated with fear of stigmatized persons, thus one item reads: "I feel afraid." The research literature which contributed to the overall content of items has indicated that stigma toward mental illness is associated with (a) character flaws or lack of personal control (Rüsch, Todd, Bodenhausen, & Corrigan, 2010; Webb, Stetz, & Hedden 2008) (b) dangerous and impulsive behavior (Link et al., 1999; Phelan, Link, Stueve, & Pescosolido, 2000; Sieff,, 2003; Wahl, 1997, (c) lack of religious faith or the influence of negative spiritual forces (Hartog & Gow 2005; Stanford, 2007; Webb, Stetz, & Hedden, 2008), and (d) tendencies to avoid or ostracize mentally ill persons (Angermeyer et al., 2004; Link et al., 1999; Norman et al., 2010). Participants were asked to rank each item for stigma on a 5-point Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strong*

Agree). Following item analysis of the stigma measure, 4 of the original 15 items were deleted due to poor internal reliability. The internal reliability for the 11 items used for data analysis in this study was .706.

Analyses

Means and standard deviations for all variables are reported in Table 1. A one-way analysis of variance was used to examine stigma among the various psychosocial explanations. Alpha was .05. The data were graphed to determine the direction of stigma in relation to the vignette presented.

A hierarchical regression analysis was also conducted to examine if empathy predicted stigma and if this relationship was moderated by adult attachment style. Stigma was regressed on empathy and adult attachment style in step 1 to assess for main effects. Step 2 examined the data for an interaction effect, which comprised the following interactions: empathy × secure adult attachment, empathy × fearful adult attachment, empathy × preoccupied adult attachment, and empathy × dismissive adult attachment. All regression analyses were examined at the .05 level. Main effects and interaction effects were graphed to assess the direction of these effects.

Table 1. Means, Standard Deviations, and Correlations for Stigma, Empathy, and Attachment

	M	*SD*	1	2	3	4	5	6
1. Stigma	26.156	4.229	--	--	--	--	--	--
2. Empathy	68.87	6.991	-.182**	--	--	--	--	--
3. Secure Attachment	4.68	1.683	.025	.213**	--	--	--	--
4. Fearful Attachment	3.95	1.823	-.023	-.136*	-.418**	--	--	--
5. Preoccupied Attachment	3.64	1.94	.052	-.078	-.080	.061	--	--
6. Dismissive Attachment	3.29	1.84	-.015	-.075	-.283**	.042	-.188**	--

Note. $N = 346$. * $p<.05$. ** $p<.01$.

RESULTS

Descriptives

The sample consisted of 347 participants of whom 78% were female and 22% were male. Reported year in school for participants included the following: 61% freshman, 21% sophomore, 7% junior, and 11% senior. Forty-seven percent of participants endorsed having someone close to them who had experienced a mental illness. Of those who indicated that an individual close to them had a mental illness, the mental illness occurred in the following relationships: 25% friend, 17% biological parent, 14% grandparent, 14% self, 14% sibling, 1% son/daughter, and 1% step-parent. Participants reported the following ethnicities: 70% Caucasian, 7% Asian American, 6% Hispanic American, 6% other, 4% Asian, 4% European, 2% African American, and 1% African. Religion/religious beliefs endorsed by participants included: 44% Protestant, 8% Catholic, 3% Agnostic, 1% Eastern Orthodox, 1% Atheist, and 1% Islamic.

Preliminary Analyses and Data Screening

Data included in analysis required at least an 80% item completion for each scale. Means, standard deviations, and bivariate correlations are recorded in Table 1. Correlational analysis yielded the following significant results: (a) stigma was negatively correlated with empathy (r = -.182, N = 347, $p < .001$); (b) empathy had a positive relationship with secure adult attachment (r = .213, N = 346, $p < .001$); and (c) empathy had a negative relationship with fearful adult attachment (r = -.136, N = 347, p = .011).

Statistics and Data Analysis

A one-way analysis of variance was conducted to evaluate the relationship between psychosocial / health explanations and stigma. The independent variable (vignettes) included five levels: schizophrenia, bipolar disorder, "severe psychological disorder," Alzheimer's disease, and homelessness. Levene's Homogeneity of Variance test indicated no violation of the homogeneity of variance assumption ($F(4,342)$ = .862, p = .487). Therefore, traditional indices were used in interpreting the F test. Results indicated a significant effect of psychosocial explanation on reported stigma, $F(4,342)$ = 10.247, $p < .001$, ω^2 = .096, suggesting a significant difference between vignettes. Post hoc analysis was conducted to examine the differences between vignettes using the Bonferroni test. This test is generally conservative and reduces the risk of familywise error (Field, 2009). Results indicated a significant difference between the following vignettes: (a) schizophrenia demonstrated higher stigma than Alzheimer's disease ($p < .001$) and lower stigma than homelessness (p = .420); (b) bipolar disorder demonstrated higher stigma than Alzheimer's disease (p = .028) and lower stigma than homelessness (p = .025); and (c) Alzheimer's demonstrated lower stigma than "a severe psychological disorder" ($p < .001$). Figure 1 provides an illustration of stigma as a function of psychosocial or health explanation.

In addition, a hierarchical regression analyses was conducted to assess whether stigma could be predicted by adult attachment style and empathy. Results indicated a significant main effect for empathy (β = -.195, $p < .05$), and a non-significant main effect for adult attachment style (secure, β = .055, p .381; fearful, β = -.031, p .602; preoccupied β = -.039, $p < .482$; and dismissive, β = -.008, p .893). Interaction terms for empathy and adult attachment style did not explain an additional significant proportion of variance for stigma (R^2 = .045, ΔR^2 = .005, ΔF (5,341) = .473, p = .755). Regression analysis results can be found in Table 2.

DISCUSSION

The hypotheses of the present study were as follows: (1) the vignettes that depicted severe and persistent mental illness (i.e., schizophrenia, bipolar disorder, and severe psychological disorder) would produce more stigmatizing responses than the other psychosocial and medical explanations, (2) participants' empathy scores would be inversely related to their scores for stigma,

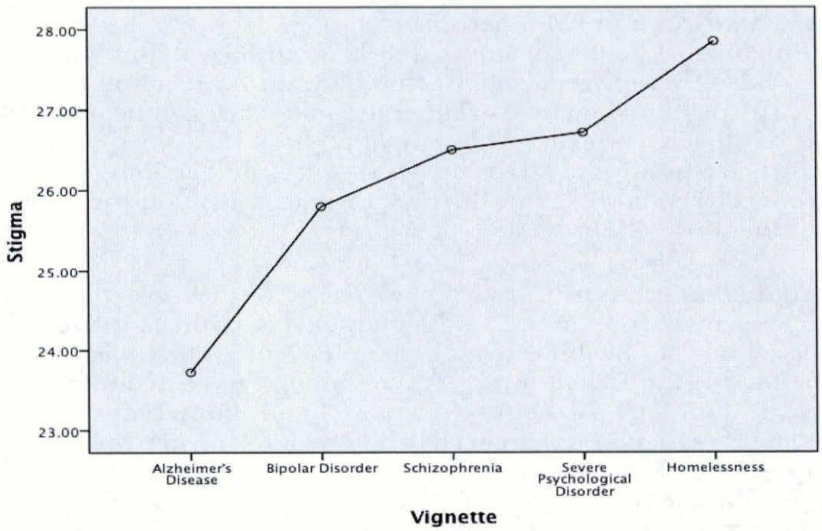

Figure 1. Stigma as a function of psycho-social or health explanation.

and (3) the relationship between empathy and stigma would be moderated by adult attachment style, such that those with secure adult attachment would demonstrate a multiplicative effect by endorsing higher empathy and lower stigma when compared to other types of adult attachment. While only some of these hypotheses were supported, our data demonstrated intriguing results.

The greatest stigma was found toward persons who had lost their homes and were living in their cars (i.e., homeless), while the least amount of stigma was found toward persons with Alzheimer's disease. After homelessness, the next most stigmatizing explanations were "severe psychological disorder," schizophrenia, and bipolar disorder, respectively. Thus, the most stigmatizing label and explanation for the man's behavior in the vignette was homelessness rather than severe and persistent mental illness, which did not support the hypothesis that the severe and persistent mental illness vignettes would be the most stigmatized of all possible psychosocial or health explanations.

Our second hypothesis, that empathy would be related to stigma and would significantly predict stigma, was supported. Correlational analysis found a significant and inverse relationship between stigma and empathy. Moreover, a regression analysis found that empathy significantly predicted stigma. These results suggest that empathy is one predictor for stigma. Our results support previous work that suggests facilitating empathy may reduce negative attitudes toward a specific population or mental health condition (Baston et al., 1997; Naylor et al., 2009).

The third hypothesis for this study was that adult attachment style would moderate the relationship between empathy and stigma, with secure adult attachment related to the most empathy and least stigma. In our study, empa-

Table 2 Regression Analysis Predicting Stigma From Empathy and Attachment

Independent variable	*B*	SE_B	β	R^2	*F*	ΔR^2	ΔF^2
Step 1				.039*	2.796*		
Empathy	-.118*	.033*	-.195*				
Secure	.138	.157	.055				
Dismissive	-.018	.131	-.008				
Preoccupied	.084	.120	.039				
Fearful	-.071	.137	-.031				
Step 2				.045	1.754	.005	.473
Empathy X Secure	.014	.192	-.326				
Empathy X Preoccupied	-.017	.017	-.553				
Empathy X Fearful	.011	.019	.325				

***Note.* N = 346. * p < .05.**

thy had a positive correlation with secure adult attachment, and a negative correlation with fearful adult attachment, suggesting that attachment style may influence the hypothesized relationship between empathy and stigma. Intuitively, it makes senses that adults who are fearfully attached do not seek close, personal bonds with others, and would feel less empathy and higher stigma toward an unknown man who is demonstrating behaviors which might be deemed socially inappropriate (Britton & Fuendeling, 2005; Cassidy & Shaver, 2008; Wayment, 2006). However, the interaction effect between empathy and adult attachment style in our analyses did not explain any additional significant amount of variance. Our data suggest that empathy is likely influenced by adult attachment style although we did not find that the interaction between empathy and adult attachment style significantly predicted stigma.

One possible explanation for the finding that severe and persistent mental illness vignettes did not elicit the most stigma is that research indicates that stigma is based in part on attributions that one should have personal control over one's life (Webster, 2009). A person's homelessness may be more likely to be viewed as being within the control of the individual, whereas disorders such as Alzheimer's disease may be viewed as biological in nature and outside of one's control. Some forms of popular media may also contribute to broadcasting the perception that homelessness is a choice. For example, recent television shows and news portrayals of homeless individuals depict them as one-dimensional characters who are merely lazy or too intoxicated to provide for themselves (Hodgetts, Cullen, & Radley, 2005; Toro, 2007). Therefore, the greater stigma found toward the man who was living in his car may possibly be explained by an attribution of control over his situation by participants.

However, it may be that stigma was the result of more than simply attributions of differing levels of personal control to various life circumstances. Perhaps differences in socioeconomic status, and thus reduced exposure between the participants in the present study and persons who are homeless, also account for some of the increased stigma toward homeless individuals. All participants were college students attending a private university, which may indicate on average a higher socioeconomic status. Those who are more afflu-

ent may not have as much exposure to individuals experiencing homelessness and, due to this unfamiliarity, may have less knowledge and feel more stigma toward those individuals.

Furthermore, in the United States, over the course of one year, approximately 1.5 million individuals experience homelessness (Substance Abuse and Mental Health Services Administration, 2011), whereas the rate of Alzheimer's disease is higher, at an estimated 5.4 million individuals (Alzheimer's Association, 2012). It is plausible that our participants had greater degree of exposure to Alzheimer's disease and less exposure to homelessness, and this may be contributing to the difference in stigma rates.

Our demographic data also indicate that approximately half of the participants in the current study had some sort of exposure to mental illness, either through family members or friends. Because it is probable that these participants had more exposure to mental illness than to someone experiencing homelessness, it follows that the homeless individuals would be more stigmatized than any of the types of psychological or neurological disorders described in the vignettes. This explanation also corresponds with research that indicates the more exposure individuals have to stigmatized conditions, the less stigma they report (Walch et al., 2012).

Clinical Implications

Various clinical implications may be discerned from this research. Mental health professionals may consider that a client's behaviors, while important in themselves when determining the degree of stigma that person may experience, are also understood by others in the context of the label attached to those behaviors. Thus clinicians must take care in reporting to clients the assignment of a particular diagnosis. Diagnostic labels themselves may be accompanied by a variety of associations which extend beyond symptoms assigned to those labels. Education about disorders, in order to counteract the stigmatizing effect of diagnostic labels, may be needed, both for the public and for persons experiencing these disorders; this education may help to reduce public stigma toward mental illness, as well as clients' personal tendencies toward self-stigma. Furthermore, clinicians might provide clients with an awareness of the potential for and types of stigma they may encounter based on the assignment of a diagnosis alone. This increased awareness may help mitigate the negative psychosocial impact of stigma; however, this latter possibility was not tested in our study, and thus needs confirmation in further research.

This study also encourages the development of empathy as a potential protective factor that may reduce stigma. As clinicians work with family members struggling to deal with a loved one's new diagnosis, education about the disorder which facilitates empathy may help mitigate the challenge of cultural stigma which may hinder family members' ability to cope with the disorder. While the data in the current study support this possibility, further research is necessary for its confirmation.

Limitations

A limitation of the present study is the use of the survey method, particularly in our assessment of empathy and adult attachment style. Unlike surveys, vignettes may more readily help participants to imagine themselves in particular situations, yet it remains unclear whether participants' attitudes as expressed in items following a vignette correlate with their attitudes and behaviors in real-life situations. Even so, the use of randomized vignettes with self-report scales may be more informative than the use of self-report scales alone.

Another limitation of this study is the homogeneous demographics of the sample. A majority of participants were first year college students (61%) and female (78%). The results obtained in this study may not generalize to the broader population, particularly with regard to age and gender.

Finally, the challenges associated with defining and operationalizing the construct of empathy may have impacted our findings. Due to the lack of consensus surrounding this construct (Aragona, Kotzalidis, & Puzella, 2013; Dziobek, 2012; Welker, 2005), we advise caution in the generalization of our results. It may be that other methodologies and assessment tools might produce different results when examining potential relationships between empathy, adult attachment, and stigma.

Future Directions for Research

Areas for future research include further exploration of concepts related to stigma and psychological disorders, empathy, and adult attachment. New research might consider the relationships that participants' socio-economic status, age, and gender may have on stigma. In addition, demographics may be varied in vignettes in addition to diagnostic labels in order to assess the impact of these additional variables.

Future research might also examine the relationship between stigma and attributions about personal control for a variety of psychological disorders. Individuals who endorse a behavioral attribution to life circumstances (e.g., laziness or lack of motivation) rather than a biological attribution (e.g., genetics or mental illness) may demonstrate differences in empathy and stigma in general (Corrigan, 2007).

Conclusion

The present study highlights that stigma is a complex, multi-faceted construct. Our findings suggest that homelessness is the most stigmatized among a series of psychosocial and health conditions. Furthermore, empathy was found to be a significant predictor of stigma. These results encourage future research with regard to the relationship between empathy and stigma, particularly the role that facilitating empathy may play in decreasing stigma. Our research aids in understanding predictors for stigma, which may help those who experience stigma lead more fulfilling, and more socially integrated, lives.

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Appendix Q: Ethical approval forms and documents

Staff / Office Use Only ***DOPEC NUMBER: _____***

Umbrella project DOPEC number (staff)_____

APPLICANT SURNAME: Rattu

Please complete all questions by underlining the correct response to facilitate correct processing

APPLICANT: **UG** **PGT** **PGR** **STAFF**

REVIEW PROCESS: **Accelerated / Full**

APPLICATION STATUS: **NEW APPLICATION, MAJOR AMENDMENT, RESUBMISSION**

APPLICATION FOR: **DISSERTATION, TEACHING, RESEARCH & PUBLICATION**

ATTTENDENCE AT HEALTH & SAFETY BRIEFING: **YES / NO / NA**

INCLUSION OF RISK ASSESSMENT FORM: **YES / NO / NA**

NOTES ON THE ROLE AND FUNCTION OF THE DEPARTMENT OF PSYCHOLOGY ETHICS COMMITTEE.

- *All decisions of the committee are based on the application form and reviewers comments ONLY. Forms should be as detailed and clear as possible. Verbal discussions are not considered as part of the application or review process.*
- *The review process strictly adheres to the University of Chester Research Governance Handbook and the BPS Code of Ethics.*
- *The decision of the committee is final. If you are a UG, PGT or PGR student you should discuss the decision of the committee with your supervisor. If you are a member of staff you may contact the chair of the committee for further clarification.*

Before completing the form researchers are expected to familiarise themselves with the regulatory codes and codes of conduct and ethics relevant to their areas of research, including those of relevant professional organisations and ensure that research which they propose is designed to comply with such codes.

Department of Psychology Ethical Approval for Research: Procedural Guidelines.

University of Chester Research Governance Handbook

http://ganymede2.chester.ac.uk/view.php?title_id=522471

BPS Code of Ethics

http://www.bps.org.uk/system/files/Public%20files/bps_code_of_ethics_2009.pdf

BPS Code of Human Research Ethics

http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

BPS Guidelines for Internet-mediated Research

http://www.bps.org.uk/system/files/Public%20files/inf206-guidelines-for-internet-mediated-research.pdf

BPS Research Guidelines and Policy Documents

http://www.bps.org.uk/publications/policy-and-guidelines/research-guidelines-policy-documents/research-guidelines-poli

Any queries email: psychology_ethics@chester.ac.uk

CHECK LIST.

Please complete the form below indicating attached materials. Prior to submission supervisors must confirm that they have reviewed the application by completing the supervisors column.

Notes: Students to indicate where information is found, supervisor to confirm by ticking green column	Supervisor fi…	Information. sheet	Letter	Email	Email info. page	Consent Form	PowerPoint	N/A
Brief details about the purpose of the study	☒	☒	☐	☐	☐	☒	☐	☐
Contact details for further information	☒	☒	☐	☐	☐	☐	☐	☐
Explanation of how and why participant has been chosen	☐	☒	☐	☐	☐	☐	☐	☐
Notification that materials/interviews are not diagnostic tools/therapy or used for staff review/development purposes	☒	☐	☐	☐	☐	☐	☐	☒
Explanation participation is voluntary	☒	☒	☐	☐	☐	☐	☐	☐
Details of any incentives or compensation	☒	☒	☐	☐	☐	☐	☐	☐
Details of how consent will be obtained	☒	☒	☐	☐	☐	☐	☐	☐
If research is observational, consent to being observed	☒	☐	☐	☐	☐	☐	☐	☒
Details of procedure so participants are informed about what to expect	☒	☒	☐	☐	☐	☐	☐	☐
Details of time commitments expected	☒	☒	☐	☐	☐	☐	☐	☐
Details of any stimuli used	☒	☒	☐	☐	☐	☐	☐	☐

Explanation of right to withdraw and right to withdraw procedure	☒	☒	☐	☐	☐	☐	☐	☐
Option for omitting questions participant does not wish to answer	☒	☒	☐	☐	☐	☐	☐	☐
Procedure regarding partially completed questionnaires or interviews	☒	☒	☐	☐	☐	☐	☐	☐
With interviews, information regarding time limit for withdrawal	☒	☐	☐	☐	☐	☐	☐	☒
Details of any advantages and benefits of taking part	☒	☒	☐	☐	☐	☐	☐	☐
Details of any disadvantages and risks of taking part	☒	☒	☐	☐	☐	☐	☐	☐
Information that data will be treated with full confidentiality and that, if published, those data will not be identifiable as theirs	☒	☒	☐	☐	☐	☐	☐	☐
Debriefing details	☒	☒	☐	☐	☐	☐	☐	☐
Dissemination information	☒	☒	☐	☐	☐	☐	☐	☐
Further information (relevant literature; support networks etc)	☒	☒	☐	☐	☐	☐	☐	☐

Supervisor Signature: ***Date:***

DEPARTMENT OF PSYCHOLOGY
APPLICATION TO DEPARTMENTAL ETHICS COMMITTEE

University of Chester

IN COMPLETING THE FORM UG & PGT STUDENTS PLEASE REFER TO YOUR HANDBOOK

Question 1: Working title of the study

Notes: The title should be a single sentence

Does empathy and adult attachment affect the stigma placed on individuals with mental health conditions?

Question 2: Applicant, name and contact details.

Notes: The primary applicant is the name of the person who has overall responsibility for the study. Include their appointment or position held and their qualifications. For studies where students and/or research assistants will undertake the research, the primary applicant is the student (UG, PGT, PGR) and supervisor is the co-applicant.

Tracey-Anne Rattu (BA Hons Sociology)
University of Chester Psychology PGT student

Question 3: Co-applicants

Notes: List the names of all researchers involved in the study. Include their appointment or position held and their qualifications.

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester

Question 4: What are the start and end dates of the study?

Notes: If exact dates are unavailable, explain why and give approximate dates.

The approximate start date for the experiment is the end of April 2017, and the approximate end date is September 2017.

Question 5: Is this project subject to external funding?

Notes: Please provide details of the funding body, grant application and PI.

No.

Question 6: Briefly describe the purpose and rationale of the research

Notes: In writing the rationale make sure that the research proposed is grounded in relevant literature, and the hypotheses emerge from recent research and are logically structured.

PGR / Staff if this application is for a funded project please attach any detailed research proposals as appropriate.

Maximum word length (300 words)

This study aims to replicate the Webb et al (2016) study in order to research the effects of empathy and adult attachment on the stigma of people diagnosed with severe, prolonged mental health illnesses.

Research proposes that labels linked to mental health disorders lead to prejudgment, stereotype and discrimination. As well as loss of lifetime prospects (Corrigan, 2004) such as less access to employment and achieving goals (Corrigan & Shapiro, 2010). This stigma has led to diagnostic terms for mental illness to be changed in recent years (Kim & Berrios, 2001). In line with the original study the labels assigned to mental illness are to be explored in order to determine if they differentiate mentally ill people from other members of society.

Empathy is to be investigated in terms of its role in the prediction of stigma. Research proposes the stigma of mental health may be effected by empathy but the link between them is unclear (Webb et al, 2016). This study aims to replicate the original study by investigating the relationship between stigma and empathy. Hypothesising that lower levels of stigma are linked to higher empathy levels (Webb et al, 2016).

Adult attachment is to be explored in relation to the relationship between empathy and stigma. There is an absence of research on the link between empathy and adult attachment styles, however research suggests that they are related (Webb et al, 2016) For example, Britton and Fuendeling (2005; as cited in Webb et al, 2016) argue that the ability to identify the needs of others is compulsory for the growth of a safe base for adult attachment.

This study has three hypotheses generated from the original study (Webb et al, 2016). Firstly more stigma will be produced from the vignette examining severe and persistent mental illness (Schizophrenia) than the vignette examining homelessness. Secondly, participants who self-report greater levels of empathy will have reduced stigma scores. Regardless of which vignette is provided to them. The third and final hypothesis is based on the hypothesised role of adult attachment created within the original study. The final hypothesis is that the relationship between stigma and empathy will be moderated by adult attachment styles. More specifically a multiplicative effect on

Question 7: Describe the methods and procedures of the study

Notes: Attach any relevant material (questionnaires, supporting information etc.) as appendices and summarise them briefly here (e.g. Cognitive Failures Questionnaire: a standardised self-report measure on the frequency of everyday cognitive slips). Do not merely list the names of measures and/or their acronyms. Include information about any interventions, interview schedules, duration, order and frequency of assessments. It should be clear exactly what will happen to participants. If this is a media based study describe and list materials include links and sampling procedure. (500 words)

Psychology undergraduate and postgraduate students (with an aim of 40 each) will be recruited via an online questionnaire using the Bristol online survey. The appendices will give the wording of the questionnaires and measures to be used, although they will be look slightly different once created online using the survey. People will be randomly assigned to read one of the two vignettes, so they will be randomly allocated to either the schizophrenia or the homeless vignette. Participants will be given an information sheet containing the study details (Appendix A), alongside a debrief at the end (Appendix B)

Materials and methods used are from the Webb et al (2016) study.

Wakabayashi et al (2006) Empathy quotient-short Form: A 22 statement item form used to measure empathy levels, assessing cognitive and affective factors that may affect empathy. Compromising of 4- point Likert scale ranging from 1 (Strongly disagree) to 4 (Strongly agree) for participants to rate all 22 statements. (See Appendix C)

Bartholomew & Horowitz (1991) Relationship questionnaire- A two dimensional model with four categories used to determine what adult attachment styles individuals reside with. Compromising of four descriptions of fearful, preoccupied, secure and dismissive adult attachment styles. Followed by a 7-point Likert numerical scale ranging from 1 (Not at all like me) to 7 (Very much like me) for participants to complete. (See Appendix D)

A vignette describing at agitated gentleman in a library followed by psychosocial explanations for his behaviour as either 'schizophrenia' or 'lost his home and is living in his car'. With half the participants seeing 'schizophrenia' and half seeing 'homelessness'. Followed by 11 statements regarding fear, loss of control, dangerous behaviours, avoidance of those with mental health disorders and lack of religious faith. Participants will rate stigma of the vignette by responding to these 11 statements using a 5point Likert scale ranging from 1 (Strongly disagree) to 5 (strongly agree). (See Appendix E)

Question 8: Has the person carrying out the study had previous experience of the procedures? If not, who will supervise that person?

Notes: Say who will be undertaking the procedures involved and what training and/or experience they have. If supervision is necessary, indicate who will provide it.

The research student has learnt about questionnaire studies within their psychology degree. However their supervisor Professor Ros Bramwell has great expertise within this area.

Question 9: What ethical issues does this study raise and what measures have been taken to address them?

Notes: Describe any discomfort or inconvenience that participants may experience. Include information about procedures that for some people could be physically stressful or might impact on the safety of participants, e.g. interviews, probing questions, noise levels, visual stimuli, equipment; or that for some people could be psychologically stressful, e.g. mood induction procedures, tasks with high failure rate. Discuss any issues of anonymity and confidentiality as they relate to your study, refer to ethics handbook and guidance notes at the end of the form. If animal based include ethical issues relating to observation.

The ethical issues that may rise in this study are that as deception is going to take place in the form of not telling individuals that they are taking part in a study assessing the stigma and attitudes of mental health, they may feel that they were lied to. Participants with prior experience of contact with individuals with mental health disorders may feel uncomfortable when reading a vignette and being told it is a description of a schizophrenic. An electronic debrief will be provided at the end of the study that will consist of the student support details for any participants who feel distressed from any part of the study. (See Appendix B)

Question 10: Who will the participants be?

Notes: Describe the groups of participants that will be recruited and the principal eligibility criteria and ineligibility criteria. Make clear how many participants you plan to recruit into the study in total.

Participants will be Psychology students (undergraduate and postgraduate) from Chester University. With an aim of recruiting 80 via RPS.

Question 11: Describe participant recruitment procedures for the study

Notes: Gives details of how potential participants will be identified or recruited. Include all advertising materials (social media messages, posters, emails, letters, verbal script etc.) as appendices and refer to them as appropriate. Describe any screening examinations. If it serves to explain the procedures better, include as an appendix a flow chart and refer to it.

Psychology postgraduate and undergraduate students will be recruited via an advertisement on the Research participation system (RPS) containing details of the study and inviting them to take part. The advertisement will also state the RPS credits that will be obtained by taking part (See Appendix F).

An advertisements containing details of the study will also be posted on to the Chester University Psychology and Psychology MSc Facebook pages (See Appendix G).

Question 12: Describe the procedures to obtain informed consent

*Notes: Describe when consent will be obtained. If consent is from **adult participants**, give details of who will take consent and how it will be done. If you plan to seek informed consent from **vulnerable groups** (e.g. people with learning difficulties, victims of crime), say how you will ensure that consent is voluntary and fully informed.*

*If you are recruiting **children or young adults** (aged under 18 years) specify the age-range of participants and describe the arrangements for seeking informed consent from a person with parental responsibility. If you intend to provide children under 16 with information about the study and seek agreement, outline how this process will vary according to their age and level of understanding.*

How long will you allow potential participants to decide whether or not to take part? What arrangements have been made for people who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?

If you are not obtaining consent, explain why not.

An electronic information sheet will be shown to participants at the beginning of the study on RPS in which participants will be asked if they are happy to take part, and if so to continue with the online study. Therefore completion and submission of the study is being taken as indicating consent. If they are not willing to take part they will be told to exit their browser and that their data will not be used. They will be informed that they can leave the study at any time.

Question 13: Will consent be written?

No

*Notes: If **yes**, include a consent form as an appendix. If **no**, describe and justify an alternative procedure (verbal, electronic etc.) in the space below.*

Guidance on how to draft Participant Information sheet and Consent form can be found on PS6001 Moodle space and in the Handbook.

Consent will be given in the form of participants reading an information sheet on RPS and then being asked to continue with the study if they are happy to do so.

Question 14: What will participants be told about the study? Will any information on procedures or the purpose of study be withheld?

Notes: Include an Information Sheet that sets out the purpose of the study and what will be required of the participant as appendices and refer to it as appropriate. If any information is to be withheld, justify this decision. More than one Information Sheet may be necessary.

Participants will be informed that this study is to determine how adult attachment and empathy levels effect how people respond to individuals in social situations regarding social, religious and health issues. It is necessary for deception to place as informing participants that they are taking part in a study to measure the perceptions and attitudes on the stigma of mental health disorders may influence their responses. The true nature of the study will be provided in an electronic debrief at the end of the study and student support information details will also be provided.

Question 15: Will personally identifiable information be made available beyond the research team (e.g. report to organisation)?

Notes: If so, indicate to whom and describe how confidentiality and anonymity will be maintained at all stages.

Personally identifiable information will not be made available within the research. Confidentiality and anonymity will be maintained as participants will be recruited via the use of the RPS online system in which data is submitted anonymously.

Question 16: What payments, expenses or other benefits and inducements will participants receive?

Notes: Give details. If it is monetary say how much, how it will be paid and on what basis is the amount determined. Indicate RPS credits.

RPS credits will be given to participants at a rate of 1 credit per 15 minutes. Concluding 2 credits in total as the approximate length of the study is 30 minutes.

Question 17: At the end of the study, what will participants be told about the investigation?

Notes: Give details of debriefings, ways of alleviating any distress that might be caused by the study and ways of dealing with any clinical problem that may arise relating to the focus of the study.

Participants will read an electronic debrief and be informed that they have taken part in a replication of the Webb et al, 2016 study. Participants will be informed that they were actually taking part in a study researching the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders. The debrief will provide student support contact details for any participants who may have become stressed due to any part of the study.

Question 18: What arrangements are there for data security during and after the study?

Notes: Digital data stored on a computer requires compliance with the Data Protection Act; indicate if you have discussed this with your supervisor and describe any special circumstances that have been identified from that discussion. Say who will have access to participants' personal data and for how long personal data will be stored or accessed after the study has ended.

Data will be collected anonymously via the RPS system and then transferred into SPSS for data analysis and for the researchers use. Statistical evaluation of the data will be produced within the researcher's final dissertation project which will be submitted to Chester University Psychology department. Identities of participants cannot be traced using this method.

The Data Protection Act will be complied with when storing participant's data on a computer.

Signatures of the study team (including date)

T A Rattu – 09/03/2017

Notes: The primary applicant and all co-applicants must sign and date the form. Scanned or electronic signatures are acceptable.

References

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four category model. *Journal of Personality and Social Psychology, 61,* 226-244.

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*(7), 614-625.

Corrigan, P. W. & Shapiro, J. R. (2010). Measuring the impact of programs that challenge the public stigma of mental illness. *Clinical Psychology Review, 30*(8), 907-922.

Kim, Y. & Berrios, G. E. (2001). The impact of the term schizophrenia on the culture of ideograph: The Japanese experience. *Schizophr Bull, 27*(2), 181-185.

Wakabayashi, A., Baron-Cohen, S., Wheelwright, S., Goldenfeld, N., Delaney, J., Fine, D., Smith, R. & Weil, L. (2006). Development of short forms of the Empathy Quotient (EQ-Short) and the Systemizing Quotient (SQ-Short). *Personality and Individual Differences, 41,* 929-940.

Webb, M., Peterson, J., Willis, S. C., Rodney, H., Siebert, E., Carlile, J. A. & Stinar, L. (2016). The role of empathy and adult attachment in predicting stigma toward severe and persistent mental illness and other psychosocial or health conditions. *Journal Of Mental Health Counselling, 38*(1), 62-78.

Appendices

Appendix A- Participant information sheet

Participant Information Sheet:
Different reactions to people in social situations

You are being invited to take part in a research study. Please read all of the information below regarding details of the study before deciding whether to take part or not. Seek advice from others if you feel that it is required and do not hesitate to ask for further information if there is anything that you do not understand. Thank you for taking time to read this.

Purpose of the study

The aim of the study is to determine how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues.

Why have I been chosen to take part?

You have been invited to take part as you are registered on an undergraduate or postgraduate Psychology course at the University Of Chester.

What do I have to do if I decide to take part?

You would be asked to complete an empathy quotient-short form in order to assess your level of empathy. You will be asked to complete a relationship questionnaire in order to determine what kind of adult attachment style you fit with.

Finally, you will be asked to read a short description of a particular social situation and you will be asked how you think you might think and feel in that situation

What transpires if you do not want to take part or if you change my mind?

Participation in this study is completely voluntary. At the beginning of the study you will read a statement on the online Bristol survey informing you that if you are happy to take part then please proceed with the experiment. This will be a form of consent. However, you do not have to answer all of the questions within the study. You are free to leave the study at any point and withdraw your participation by closing the online browser and your data will not be used within this study.

Confidentiality

All data is stored anonymously.

What happens with my results?

All data will be obtained using the RPS anonymous system. At the end of the study this data will be inputted into SPSS for further data analysis to be used within a dissertation project.

What are the risks and benefits involved within the study?

The benefit of taking part within this study is that you will obtain 2 RPS credits. The risk of taking in this study is that you will be asked personal questions about your relationships with other people and how you to respond to others in social situations. If you feel that this may be an upsetting experience for you then you are advised to not take part.

What is the expected time frame of the study?

The study will take approximately 30 minutes to complete.

Where will the research take place?

The study can be completed on any computer that has access to the RPS system. The choice of where you wish to complete the study is totally yours. It is suggested for you to complete this study in a quiet environment, where other people are unable to view observe your answers.

Will the results be published?

The data obtained from this study will be inputted in SPSS for further analysis in order to generate means, standard deviations and appropriate inferential statistics. This will then be used within a dissertation project that will be handed into the Chester University Psychology department. Your identity will not be disclosed as all data is reported anonymously.

Staff details of those conducting the research

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Dissertation supervisor: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

CH1 4BJ

01244 511477

What do you do if you feel unhappy after taking part in the study?

The student support service is located in the Binks building of Chester University Parkgate Road Campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. If taking part in this study makes you aware that you are experiencing distress in your own personal life then it may be advisable for you to contact your PAT or student support. If this does not resolve the issue for you then it may be advisable for you to contact your GP. Alternatively you may wish to contact the Samaritans helpline for advice, you can email them at jo@samaritans.org or call them on 116 123.

Appendix B- Debrief

University of Chester

Debrief

First of all thank you for taking part within this study!

When agreeing to take part in this study you read a participant information sheet that stated you were going to be taking part in a study to determine the effects of adult attachment and empathy on responses to individuals in social situations regarding social, religious and health issues.

This study actually investigated the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders and was a replication of the Webb, et al (2016) study. As research suggests that empathy may reduce stigma and adult attachment may have an influence on stigma, these research ideas were explored further.

Deception took place within this study as it was necessary to ensure that prior knowledge did not affect the results obtained.

If you have any further questions regarding this study then do not hesitate to contact the research team.

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

CH1 4BJ

01244 511477

Furthermore if you feel that you have any concerns or feel any distress due to any part of this study then the student support team is located within the Binks building of Chester University, Parkgate Road campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. Furthermore you may wish to speak to your tutor or contact a GP if you feel necessary. Alternatively you can contact the Samaritans helpline for support and advice, you can email them at jo@samaritans.org or call them on 116 123.

Thank you once again for taking part in this study.

Appendix C- Wakabayashi et al (2006) Empathy quotient-short Form:

1. I can easily tell if someone else wants to enter a conversation.

3. I really enjoy caring for other people.

4. I find it hard to know what to do in a social situation.

8. I often find it difficult to judge if something is rude or polite.

9. In a conversation, I tend to focus on my own thoughts rather than on what my listener might be thinking.

11. I can pick up quickly if someone says one thing but means another.

12. It is hard for me to see why some things upset people so much.

13. I find it easy to put myself in somebody else's shoes.

14. I am good at predicting how someone will feel.

15. I am quick to spot when someone in a group is feeling awkward or uncomfortable.

18. I can't always see why someone should have felt offended by a remark.

21. I don't tend to find social situations confusing.

22. Other people tell me I am good at understanding how they are feeling and what they are thinking.

26. I can easily tell if someone else is interested or bored with what I am saying.

28. Friends usually talk to me about their problems as they say that I am very understanding.

29. I can sense if I am intruding, even if the other person doesn't tell me.

31. Other people often say that I am insensitive, though I don't always see why.

34. I can tune into how someone else feels rapidly and intuitively.

35. I can easily work out what another person might want to talk about.

36. I can tell if someone is masking their true emotion.

38. I am good at predicting what someone will do.

39. I tend to get emotionally involved with a friend's problems.

4- Point Likert scale to be used:

1 (Strongly disagree)
2 (Disagree)
3 (Agree)
4 (Strong Agree)

Appendix D- Bartholomew & Horowitz (1991) Relationship questionnaire

Scale:

Following are four general relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style.

Style

Style A

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style B

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style C

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Style D

1 2 3 4 5 6 7

Not at all like me Neutral Mixed Very much like me

Appendix E- Vignette and 11 statements

Vignettes and Stigma Items

Imagine you are at the local library. You hear a disturbance near one of the bookshelves. You turn and see a woman trying to calm a man who appears agitated. The man's hair is uncombed and his clothing is dishevelled. He yells to the woman that people want to hurt him. After a couple minutes, the man calms down. He and the woman quietly leave the library together. Later, as you check out your books from the library, the librarian tells you that the man who was upset has (schizophrenia / lost his home and is living in his car).

Now consider each of the following statements. How much do you agree with each statement?

I feel afraid.

This man might be dangerous.

I think this man could have controlled his feelings and chosen to remain calm.

This man shows lack of faith in God.

The librarians should keep people with these problems out of the library.

This man might be influenced by demonic forces.

No one in my family could ever have this sort of problem.

I could never have this sort of problem.

I feel compassion for this man*

I want to learn more about this type of problem this man has*

This man has done nothing to cause his problems*

Note. * Signifies reverse scored items. Participants were asked to rank each item for stigma on a 5-point Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strong Agree)*.

Appendix F - Research Participation System Advertisement

Abstract: This is an online study aiming to determine how adult attachment and empathy levels affect responses to people in social situations regarding, religious, social and health issues.

Description: You are invited to take part in this online research study investigating if adult attachment and empathy levels affect the way people respond to others in social situations regarding religious, social and health matters. The study will include completion of two initial empathy and relationship questionnaires. Then you will be asked to read a short paragraph of a social situation, then complete a final questionnaire based on how that might have made you feel in that situation. The results will enable us to further understand the effects of attachment and empathy and reactions to people in different social situations. As the questions will ask you about personal relationships, distress may arise. You do not have to answer all of the questions and are free to withdraw at any point, simply by closing the web browser. Your data will then not be used in the study. This study will take up to 30 minutes to complete and will give you 2 RPS credits.

Appendix G

As part of my PS7112 Research Dissertation module I am looking for Psychology students to take part in my study. The study aims to investigate adult attachment and empathy effects on reactions to people in different social situations. If this interests you then please email me at 1620687@chester.ac.uk. Thank you.

ETHICS COMMITTEE DATE:

CHAIRS COMMENTS:

☐ **Read and address all reviewers comments**

ACCEPTABLE

☐ **Action: You may now commence with data collection subject to approval from any relevant external agencies.**

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

☐ **ACCEPTABLE SUBJECT TO SUBMISSION OF AMENDMENT FORM**
☐ **Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.**
☐ **Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.**

ACCEPTABLE SUBJECT TO CONDITIONS LISTED BY CHAIR:

☐ **Action: Resubmit application for full review ensuring you have completed section B**

REVISE AND RESUBMIT:

☐ **Action: Resubmit application for full review ensuring you have completed section B**

SIGNATURE: ……

Guidance Notes / Advice on completing the ethical considerations aspects of a programme of research

Consent

Informed consent must be obtained for all participants before they take part in your project. The form should clearly state what they will be doing, drawing attention to anything they could conceivably object to subsequently. It should be in language that the person signing it will understand. It should also state that they can withdraw from the study at any time and the measures you are taking to ensure the confidentiality of data. If children are recruited from schools you will require the permission, depending on the school, of the head teacher, and of parents. Children over 14 years should also sign an individual consent form themselves. If conducting research on children you will normally also require Criminal Records Bureau clearance. You will need to check with the school if they require you to obtain one of these. It is usually necessary if working alone with children, however, some schools may request you have CRB clearance for any type of research you want to conduct within the school. Research to be carried out in any institution (prison, hospital, etc.) will require permission from the appropriate authority.

Covert or Deceptive Research

Research involving any form of deception can be particularly problematical, and you should provide a full explanation of why a covert or deceptive approach is necessary, why there are no acceptable alternative approaches not involving deception, and the scientific justification for deception.

Debriefing

How will participants be debriefed (written or oral)? If they will not be debriefed, give reasons. Please attach the written debrief or transcript for the oral debrief. This can be particularly important if covert or deceptive research methods are used.

Withdrawal from investigation

Participants should be told explicitly that they are free to leave the study at any time without jeopardy. It is important that you clarify exactly how and when this will be explained to participants. Participants also have the right to withdraw their data in retrospect, after you have received it. You will need to clarify how they will do this and at what point they will not be able to withdraw (i.e. after the data has been analysed and disseminated).

Protection of participants

Are the participants at risk of physical, psychological or emotional harm greater than encountered ordinary life? If yes, describe the nature of the risk and steps taken to minimise it.

Observational research

If observational research is to be conducted without prior consent, please describe the situations in which observations will take place and say how local cultural values and privacy of individuals and/or institutions will be taken into account.

Giving advice

Staff should not put themselves in a position of authority from which to provide advice and should in all cases refer participants to suitably qualified and appropriate professionals.

Research in public places

You should pay particular attention to the implications of research undertaken in public places. The impact on the social environment will be a key issue. You must observe the laws of obscenity and public decency. You should also have due regard to religious and cultural sensitivities.

Confidentiality/Data Protection

You must comply with the Data Protection Act

- It is very important that the Participant Information Sheet includes information on what the research is for, who will conduct the research, how the personal information will be used, who will have access to the information and how long the information will be kept for. This is known as a 'fair processing statement.'
- You must not do anything with the personal information you collect over and above that for which you have consent.
- You can only make audio or visual recordings of participants with their consent (this should be stated on the Participant Information sheet)
- Identifiable personal information should only be conveyed to others within the framework of the act and with the participant's permission.
- You must store data securely. Consent forms and data should be stored separately and securely.
- You should only collect data that is relevant to the study being undertaken.
- Data may be kept indefinitely providing its sole use is for research purposes and meets the following conditions:
- The data is not being used to take decisions in respect of any living individual.
- The data is not being used in any which is, or is likely to, cause damage and/or distress to any living individual.
- You should always protect a participant's anonymity unless they have given their permission to be identified (if they do so, this should be stated on the Informed Consent Form).
- All data should be returned to participants or destroyed if consent is not given after the fact, or if a participant withdraws.

Animal rights

Research which might involve the study of animals at the University is not likely to involve intrusive or invasive procedures. However, you should avoid animal suffering

of any kind and should ensure that proper animal husbandry practices are followed. You should show respect for animals as fellow sentient beings.

Environmental protection

The negative impacts of your research on the natural environment and animal welfare, must be minimised and must be compliant to current legislation. Your research should appropriately weigh longer-term research benefit against short-term environmental harm needed to achieve research goals.

University of Chester

UNIVERSITY OF CHESTER, DEPARTMENT OF PSYCHOLOGY

APPLICATION FOR ETHICAL APPROVAL AMENDMENT FORM

A) Applicant and personnel

Applicant: *Tracey-Anne Rattu*
Project title: Does empathy and adult attachment affect the stigma placed on individuals with mental health conditions?
Applicant status: ☐ Staff → Go to Section B ☐PGR ☐Undergraduate ☒Postgraduate taught
Supervisor: Ros Bramwell

B) Declaration

1. ☒ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee and I am required to make the following amendments to my application.
   List the recommendations of the committee. *To confirm how random allocation of participants to vignettes will occur through the Bristol online survey.*
   Details of a contingency plan.
   Details of a support line external from the university on the information sheet and debrief.
   Question 12 stated that written and electronic consent will be given, further clarification of the exact method of consent is required.
   Will there be a need for a demographic section as part of the questionnaire?

Describe how you have addressed these requirements. *Advice has been sought from the Psychology technicians on how participants will be randomly allocated to vignettes and methods have been devised.*

In regards to a contingency plan, if the current recruitment method proves unsuccessful then an ethics amendment form would be resubmitted proposing an alternative recruitment strategy in order to gain ethical approval first.

Details of the Samaritans helpline has been added to the information sheet and debrief, in order to provide a helpline external to the University. (See Appendix A and B)

Question 12 has been amended to confirm that completion and submission of the study is being taken as indicating consent. I apologise for this error (See Appendix C). Finally, after careful consideration it is confirmed that a demographic section is not required within the questionnaire as this method was not used within the original study and is therefore not required.

2. ☐ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee that was approved on Click here to enter a date.
I wish the committee to consider the following amendments I would like to make to the research plan (attach the original approved application form) *Click here to enter text.*

☐ I am a member of staff. **Signed:** _____ **Date:** Click here to enter a date.
Print the amendment form on BLUE PAPER and submit to the Dept. Office
☒ I am an UG/PGT/PGR student. I have discussed any amendments with my project supervisor.
Print the amendment form on BLUE PAPER and submit to the Dept. Office

Signed: _____ **(Lead Applicant)** Date: 27/03/2017

Supervisor comments:
I have discussed the recommendations of the committee with the applicant and I am satisfied they have met
the stated requirements./I support the amendments to the research plan. (delete as appropriate)
☐ Yes Sign and date the form ☐ No Comments: *Click here to enter text.*

Signed: _____ **(Supervisor)** Date: Click here to enter a date.

COMMITTEE COMMENTS:

☐ **ACCEPTABLE: You may now commence with data collection subject to approval from any relevant external agencies.**

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

☐ **ACCEPTABLE SUBJECT TO SUBMISSION OF FURTHER AMENDMENT FORM.**

☐ **Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.**

☐ **Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.**

Signed: _____ Date: Click here to enter a date.

Appendices

Appendix A: Participant information sheet.

Participant Information Sheet:
Different reactions to people in social situations

You are being invited to take part in a research study. Please read all of the information below regarding details of the study before deciding whether to take part or not. Seek advice from others if you feel that it is required and do not hesitate to ask for further information if there is anything that you do not understand. Thank you for taking time to read this.

Purpose of the study

The aim of the study is to determine how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues.

Why have I been chosen to take part?

You have been invited to take part as you are registered on an undergraduate or postgraduate Psychology course at the University Of Chester.

What do I have to do if I decide to take part?

You would be asked to complete an empathy quotient-short form in order to assess your level of empathy. You will be asked to complete a relationship questionnaire in order to determine what kind of adult attachment style you fit with.

Finally, you will be asked to read a short description of a particular social situation and you will be asked how you think you might think and feel in that situation

What transpires if you do not want to take part or if you change my mind?

Participation in this study is completely voluntary. At the beginning of the study you will read a statement on the online Bristol survey informing you that if you are happy to take part then please proceed with the experiment. This will be a form of consent. However, you do not have to answer all of the questions within the study. You are free to leave the study at any point and withdraw your participation by closing the online browser and your data will not be used within this study.

Confidentiality

All data is stored anonymously.

What happens with my results?

All data will be obtained using the RPS anonymous system. At the end of the study this data will be inputted into SPSS for further data analysis to be used within a dissertation project.

What are the risks and benefits involved within the study?

The benefit of taking part within this study is that you will obtain 2 RPS credits. The risk of taking in this study is that you will be asked personal questions about your

relationships with other people and how you to respond to others in social situations. If you feel that this may be an upsetting experience for you then you are advised to not take part.

What is the expected time frame of the study?

The study will take approximately 30 minutes to complete.

Where will the research take place?

The study can be completed on any computer that has access to the RPS system. The choice of where you wish to complete the study is totally yours. It is suggested for you to complete this study in a quiet environment, where other people are unable to view observe your answers.

Will the results be published?

The data obtained from this study will be inputted in SPSS for further analysis in order to generate means, standard deviations and appropriate inferential statistics. This will then be used within a dissertation project that will be handed into the Chester University Psychology department. Your identity will not be disclosed as all data is reported anonymously.

Staff details of those conducting the research

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Dissertation supervisor: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

CH1 4BJ

01244 511477

What do you do if you feel unhappy after taking part in the study?

The student support service is located in the Binks building of Chester University Parkgate Road Campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. If taking part in this study makes you aware that you are experiencing distress in your own personal life then it may be advisable for you to contact your PAT or student support. If this does not resolve the issue for you then it may be advisable for you to contact your GP. Alternatively you may wish to contact the Samaritans helpline for advice, you can email them at jo@samaritans.org or call them on 116 123.

Appendix B: Debrief

Debrief

First of all thank you for taking part within this study!

When agreeing to take part in this study you read a participant information sheet that stated you were going to be taking part in a study to determine the effects of adult attachment and empathy on responses to individuals in social situations regarding social, religious and health issues.

This study actually investigated the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders and was a replication of the Webb, et al (2016) study. As research suggests that empathy may reduce stigma and adult attachment may have an influence on stigma, these research ideas were explored further.

Deception took place within this study as it was necessary to ensure that prior knowledge did not affect the results obtained.

If you have any further questions regarding this study then do not hesitate to contact the research team.

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

Chester

CH1 4BJ

01244 511477

Furthermore if you feel that you have any concerns or feel any distress due to any part of this study then the student support team is located within the Binks building of Chester University, Parkgate Road campus. The contact email for student support is as follows: student.support@chester.ac.uk and the telephone contact number is 01244 511550. Furthermore you may wish to speak to your tutor or contact a GP if you feel necessary. Alternatively you can contact the Samaritans helpline for support and advice, you can email them at jo@samaritans.org or call them on 116 123.

Thank you once again for taking part in this study.

Appendix C: Amended question 12.

Question 12: Describe the procedures to obtain informed consent
*Notes: Describe when consent will be obtained. If consent is from **adult participants**, give details of who will take consent and how it will be done. If you plan to seek informed consent from **vulnerable groups** (e.g. people with learning difficulties, victims of crime), say how you will ensure that consent is voluntary and fully informed.* *If you are recruiting **children or young adults** (aged under 18 years) specify the age-range of participants and describe the arrangements for seeking informed consent from a person with parental responsibility. If you intend to provide children under 16 with information about the study and seek agreement, outline how this process will vary according to their age and level of understanding.* *How long will you allow potential participants to decide whether or not to take part? What arrangements have been made for people who might not adequately understand verbal explanations or written information given in English, or who have special communication needs?* *If you are not obtaining consent, explain why not.*

An electronic information sheet will be shown to participants at the beginning of the study on RPS in which participants will be asked if they are happy to take part, and if so to continue with the online study. Therefore completion and submission of the study is being taken as indicating consent. If they are not willing to take part they will be told to exit their browser and that their data will not be used. They will be informed that they can leave the study at any time.

University of Chester

UNIVERSITY OF CHESTER, DEPARTMENT OF PSYCHOLOGY

C) Applicant and personnel

Applicant: *Tracey-Anne Rattu*
Project title: Does empathy and adult attachment affect the stigma placed on individuals with mental health conditions?
Applicant status: ☐ Staff → Go to Section B ☐PGR ☐Undergraduate ☒Postgraduate taught
Supervisor: Ros Bramwell

D) Declaration

3. ☐ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee and I am required to make the following amendments to my application.
List the recommendations of the committee.

Describe how you have addressed these requirements.

4. ☒ I have submitted an application for ethical approval to the Department of Psychology Ethics Committee that was approved on 30/03/2017
I wish the committee to consider the following amendments I would like to make to the research plan (attach the original approved application form) *I am applying for permission to extend my recruitment, please see attached protocol (Appendix A) and other appendices.*

☐ I am a member of staff. **Signed:** _____ **Date:** -
Print the amendment form on BLUE PAPER and submit to the Dept. Office
☒ I am an UG/PGT/PGR student. I have discussed any amendments with my project supervisor.
Print the amendment form on BLUE PAPER and submit to the Dept. Office

Signed: _____ **(Lead Applicant)** **Date:** 31/05/2017

Supervisor comments:
I have discussed the recommendations of the committee with the applicant and I am satisfied they have met the stated requirements./I support the amendments to the research plan. (delete as appropriate)
☐ Yes Sign and date the form ☐ No Comments: *Click here to enter text.*

Signed: _____ **(Supervisor)** **Date:** Click here to enter a date.

COMMITTEE COMMENTS:

☐ **ACCEPTABLE: You may now commence with data collection subject to approval from any relevant external agencies.**

DATA COLLECTION IS NOT PERMISSABLE UNDER THESE CONDITIONS

☐ **ACCEPTABLE SUBJECT TO SUBMISSION OF FURTHER AMENDMENT FORM.**

☐ **Acceptable subject to conditions listed by chair. Discuss conditions highlighted with supervisor and submit ethics application amendment form direct to office.**

☐ **Acceptable subject to conditions listed by chair: Submit ethics application amendment form direct to office.**

Signed: _____ Date: Click here to enter a date.

Appendices

Appendix A: Protocol

As the current recruitment procedure to recruit only Psychology students from Chester University is proving to be quite limited in terms of the number of participants, I am applying for permission to extend this. Currently Psychology students are completing the study via RPS online, therefore I aim to recruit friends and family in person and ask them to complete the questionnaire by hand. That way I will know the student's responses have been completed online and non-student friends and family responses have been completed by hand in person. As I am aware of which of my friends and family members are students, I will not approach those who I know are currently students in order to aim for an equal amount of student and non-student participants. However, I will include a question to confirm this (Appendix D). As the study involves a random assignment to one of two versions of a vignette, an equal number of the two versions will be created, placed into anonymous envelopes and shuffled into a random order. This will ensure that both I and the participant are fully unaware as to which version of the vignette they have been allocated to.

The participants I aim to recruit are family and friends of whom I will approach in person and ask them verbally: "I am wondering if you would like to take part in a psychology study that aims to investigate how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues. Please note that if you chose to take part then all of your data will remain anonymous and you can leave the study at any time." If they tell me that they

wish to take part then this will be taken as a form of consent and all of the information for the study will be handed to them in an anonymous envelope. Inside this envelope will be the amended information sheet (Appendix B),all of the questionnaires and a question for them to fill out to state if they are a student of not (Appendix D).The participants will then be asked to complete the questionnaires by hand and place them back into an envelope. Once the participants have completed the study I will then hand them the debrief (Appendix C) to read and thank them for their participation. .The envelopes will then be handed back to me in person, and kept safe and secure within a locked cupboard within my home. The envelopes will not contain any identifiable information and once enough participants have completed the study, all of the envelopes will be shuffled around to ensure that they are in a totally mixed order before opening. This is to ensure that the data remains totally anonymous.

Appendix B: Participant information sheet.

Participant Information Sheet:
Different reactions to people in social situations

You are being invited to take part in a research study. Please read all of the information below regarding details of the study before deciding whether to take part or not. Seek advice from others if you feel that it is required and do not hesitate to ask for further information if there is anything that you do not understand. Thank you for taking time to read this.

Purpose of the study

The aim of the study is to determine how adult attachment and empathy levels affect how people respond to individuals in social situations regarding social, religious and health issues.

Why have I been chosen to take part?

You have been invited to take part as you are a family member or friend.

What do I have to do if I decide to take part?

You would be asked to complete an empathy quotient-short form in order to assess your level of empathy. You will be asked to complete a relationship questionnaire in order to determine what kind of adult attachment style you fit with.

Finally, you will be asked to read a short description of a particular social situation and you will be asked how you think you might think and feel in that situation

What transpires if you do not want to take part or if you change my mind?

Participation in this study is completely voluntary. By filling in and returning the questionnaire, you will be giving your consent to be part of this study. You do not have to answer all of the questions within the study. You are free to leave the study at any point up to the point where you hand your questionnaire back to me. If you do choose to leave the study, you can simply destroy any part-completed questionnaire or you can simply write 'withdraw' across the top of the questionnaire, put it in the envelop and hand it back to me. In this case, your answers will not be used.

Confidentiality

All data is stored anonymously.

What happens with my results?

All data will be obtained from the handwritten questionnaires which will be totally anonymous. At the end of the study this data will be inputted into SPSS which is a statistical software for further data analysis to be used within a dissertation project.

What are the risks and benefits involved within the study?

The benefit of taking part within this study is that you may enjoy taking part within a psychology experiment. The risk of taking in this study is that you will be asked personal questions about your relationships with other people and how you to respond to others in social situations. If you feel that this may be an upsetting experience for you then you are advised to not take part.

What is the expected time frame of the study?

The study will take approximately 30 minutes to complete.

Where will the research take place?

The choice of where you wish to complete the study is totally yours. It is suggested for you to complete this study in a quiet environment, where other people are unable to view observe your answers.

Will the results be published?

The data obtained from this study will be inputted into SPSS for further analysis in order to generate means, standard deviations and appropriate inferential statistics which are required to analyse the results. This will then be used within a dissertation project that will be handed into the Chester University Psychology department. Your identity will not be disclosed as all data is reported anonymously.

Staff details of those conducting the research

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Dissertation supervisor: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

Parkgate Road

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01244 511477

What do you do if you feel unhappy after taking part in the study?

If taking part in this study makes you aware that you are experiencing distress in your own personal life then it may be advisable for you to contact any members of your family or friends that you feel can support you. If this does not resolve the issue for you then it may be advisable for you to contact your GP. Alternatively you may wish to contact the Samaritans helpline for advice, you can email them at jo@samaritans.org or call them on 116 123.

Appendix C: Debrief

Debrief

First of all thank you for taking part within this study!

When agreeing to take part in this study you read a participant information sheet that stated you were going to be taking part in a study to determine the effects of adult attachment and empathy on responses to individuals in social situations regarding social, religious and health issues.

This study actually investigated the effects of empathy and adult attachment on the stigma of individuals diagnosed with severe, persistent mental health disorders and

was a replication of the Webb, et al (2016) study. As research suggests that empathy may reduce stigma and adult attachment may have an influence on stigma, these research ideas were explored further.

Deception took place within this study as it was necessary to ensure that prior knowledge did not affect the results obtained.

If you have any further questions regarding this study then do not hesitate to contact the research team.

PGT Psychology student researcher at Chester University: Tracey-Anne Rattu
Contact email: 1620687@chester.ac.uk

Research Co-ordinator: Ros Bramwell

Head of Psychology

Associate Dean, Faculty of Social Science

University of Chester,

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CH1 4BJ

01244 511477

Furthermore if you feel that you have any concerns or feel any distress due to any part of this study then it may be advisable for you to speak to friends or family who can support you. Furthermore you may wish to contact a GP if you feel necessary. Alternatively you can contact the Samaritans helpline for support and advice, you can email them at jo@samaritans.org or call them on 116 123.

Thank you once again for taking part in this study.

Appendix D: Question added after information sheet.

Before you begin the study we would first like to ask you if you are a student. Please circle your answer

Yes No